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# Vascular plant, bryophyte, and lichen biodiversity of Agguttinni Territorial Park, Baffin Island, Nunavut, Canada: an annotated species checklist of a new Arctic protected area

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**Abstract.** Agguttinni Territorial Park is a large, newly established park on the east-central coast of Baffin Island in Nunavut, Canada. Previous knowledge of the plant and lichen biodiversity was limited and based mostly on collections made during the 1950 Baffin Island Expedition. We conducted a floristic inventory of the park in 2021 and re-examined previous collections. We recorded 141 species of vascular plants belonging to 25 families, 69 species of bryophytes in 27 families, and 93 species of lichens in 23 families. Most of the vascular plant and bryophyte species are new records for the park area, and some vascular plants, bryophytes, and lichens are newly reported for Baffin Island, Nunavut, or the Canadian Arctic or represent significant range extensions. Vascular plant species diversity varied greatly among localities, with inland valleys at the heads of fiords showing highest diversity and interior rocky barrens showing the lowest.

**Key words.** Canadian Arctic Archipelago, ferns, floristic inventory, flowering plants, liverworts, mosses, species diversity

**Gillespie LJ, Sokoloff PC, Levin GA, Doubt J, McMullin RT** (2024) Vascular plant, bryophyte, and lichen biodiversity of Agguttinni Territorial Park, Baffin Island, Nunavut, Canada: an annotated species checklist of a new Arctic protected area. Check List 20 (2): 279–443. https://doi.org/10.15560/20.2.279

## INTRODUCTION

This study focuses on a floristic inventory of Agguttinni Territorial Park (TP), located west of Clyde River hamlet [also commonly known as Kanngiqtugaapik], on the east-central coast of Baffin Island in Nunavut, Canada. Agguttinni TP is the largest territorial park in Nunavut, stretching from Baffin Bay southwest to the Barnes Ice Cap (Figure 1). The park includes some of the most spectacular scenery in Canada, with ice-capped mountains and very long, deep fiords, and, although remote and difficult to access, is known as an ecotourism and rock-climbing destination. Its diverse topography results in the park having large microclimatic variation, many different habitats, and a correspondingly diverse Arctic flora.

The flora of east-central Baffin Island has been little explored or documented. Most of our knowledge comes from plant and lichen collections made during the 1950 Baffin Island Expedition led by P.D. Baird (Baird et al. 1950; Baird 1952), which until now was the only botanical focused study of the region. Comprehensive results of their plant research were never published, although the vascular plant collections were used in making species distribution maps for the Illustrated Flora of the Canadian Arctic Archipelago (Porsild 1957, 1964), and more recently in the updated flora for that region by Aiken et al. (2007). Only two papers focusing on the vascular plants were published (Dansereau 1954; Dansereau and Steiner 1956), and neither specifically covered floristics, species diversity, or vegetation of east-central Baffin Island. Surprisingly, and in contrast to elsewhere in the Arctic, the lichen flora of this area was better documented. Lichen collections made during this expedition formed the basis of a comprehensive publication, The Lichens of Baffin Island (Hale 1954). These 1950 floristic studies were mostly conducted south of Agguttinni TP near the head of Clyde Inlet.

Given the general lack of knowledge of plant and lichen diversity on east-central Baffin Island, and more specifically within Agguttinni TP, we conducted a botanical survey of Agguttinni TP between July 22 and August 22, 2021. This study was undertaken in partnership with Nunavut Parks and Special Places as part of their resource assessment of the park. Here we report the results of our botanical survey of Agguttinni TP together with a comprehensive re-examination of previous collections.

OPEN ACCESS

**Academic editor:** Robert Philipp Wagensommer
**Received:** 24 August 2023
**Accepted:** 5 February 2024
**Published:** 5 March 2024

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**Previous botanical collecting in Agguttinni Territorial Park**. Previous collecting in the area now located within the Agguttinni TP boundary has been limited. During the 1950 Baffin Island Expedition, the expedition botanist, P. Dansereau, made 14 collections of vascular plants, mostly from the head of Eglinton Fiord (=Arviqtujuq Kangiqtua) (11), with a few from Gee Lake on the Barnes Plateau (2) and Gibbs Fiord (1), and 14 of bryophytes from the head of Eglinton Fiord (9) and Gee Lake (5). V.C. Wynne-Edwards, the expedition ornithologist, made one vascular plant and one bryophyte collection at the head of Eglinton Fiord, and Hans Rothtesberger, an expedition mountaineer, made eight collections of vascular plants from the head of Eglinton Fiord and one from Swiss Bay. On the same expedition, M.E. Hale made 62 lichen (Hale 1954) and 19 bryophyte collections on the Barnes Plateau near the south end of the Barnes Ice Cap. Collections from this expedition are housed primarily in herbaria at the Canadian Museum of Nature (CMN: CAN, CANL, CANM; all taxa), New York Botanical Garden (NY; bryophytes), Smithsonian Institution (US; bryophytes), Université de Montréal (MT; vascular plants), and University of Wisconsin (WIS; lichens); for herbarium acronyms refer to Thiers (2023).

From August 7–9, 1966, Jane Philpot, Penny Crompton, and June Ryder made collections of vascular plants at Remote Lake on Remote Peninsula while conducting geomorphological research for the Canadian government (Geographical Branch, Department of Energy, Mines, and Resources). These were sent to Patrick John Webber at York University in Toronto for identification (Løken et al. 1966). The herbarium at York University is currently in storage and inaccessible, and this primary set of specimens has not yet been located (Dawn Bazely, personal communication, 2020). Thirteen specimens from this fieldwork (likely duplicates of specimens at York University) have been located at the University of Colorado Museum of Natural History herbarium (COLO), where Webber began working in 1967. In 1974, G.H. Miller made two collections of subfossil bryophytes buried in coastal cliffs near the Kuugaaluk river mouth. These specimens, vouchers for a radiocarbon dating study (Blake 1988), are housed at COLO and one was dated to almost 10,000 years old.

Between 2012 and 2018, CMN staff made several collections during brief stops while participating on Students on Ice (SOI) or Canada C3 expeditions. In 2012, Julian Starr, then with the CMN, made two collections of *Carex* in the area around Swiss Bay while on an SOI expedition; Starr also made an unspecified number of collections of other vascular plants from this locality, but these have not yet been processed and are not available for study. In 2017, Oluwayemisi Dare, a CMN scientist on the Canada C3 expedition, made 36 vascular plant, 31 lichen, and nine bryophyte collections at Tingijattut on the northeast corner of Kangiqtualuk Agguqti and at Ravenscraig Harbour on the eastern shore of Arviqtujuq Kangiqtua. In 2018, Jennifer Doubt, CMN Botany Curator and bryophyte specialist, made 27 bryophyte collections at Tingijattut while briefly onshore during an SOI expedition. As short as it was, this stop represents the most intensive study of liverworts and mosses in Agguttinni TP to date. In 2022, Martha Raynolds (University of Alaska) and Helga Bültmann (University of Münster), as part of an in-depth vegetation study, made 44 vascular plant, 3 bryophyte, and 8 lichen collections near Generator Lake on the Barnes Plateau in the southern part of the park.

## STUDY AREA

Agguttinni Territorial Park (TP) is the largest of Nunavut's territorial parks, covering an area of around 16,465 km$^2$. It is located on the east-central coast of Baffin Island in the Qikiqtaaluk Region of Nunavut, Canada (Figure 1). This new park, currently in the implementation stage, was announced in 2019 after many years of joint planning and collaborative partnership between the people of Clyde River and the Government of Nunavut (Chattha 2019; Tranter 2019). Agguttinni means "where the prevailing wind occurs" in the Inuktitut local dialect. The park includes important bird areas, key habitats for polar bears and caribou, and numerous important Inuit cultural sites. The park is very remote; there are no roads, and access is only by helicopter, boat in the summer, or snowmobile in the winter.

Place names, landform, and marine features often have both Inuktitut and English names, and many are now officially known by their Inuktitut name. Official names, whether Inuktitut or English, are used throughout. Formerly used English names are provided in square brackets where appropriate, as are landform designations for Inuktitut names.

Agguttinni TP has a complex topography of coastal lowlands, high mountains, long fiords, large deep U-shaped valleys, smaller sheltered side valleys, and an extensive interior plateau, which results in considerable climatic and substrate variation (Figure 1). Precipitation, temperature, insolation, and exposure vary with elevation and proximity to the coast. On a smaller scale, differences in moisture and nutrient availability, slope aspect, and exposure result in microhabitat—and thus species—diversity. Substrates include bedrock, glacial till, and other glacial deposits, as well as alluvial, lake, and marine deposits such as cobble and sand. Bedrock and soils in the park are primarily acidic, with few calcareous outcrops. Numerous glaciers cap the higher peaks. The park includes about one third of the large Barnes Ice Cap in central Baffin Island.

Agguttinni TP lies within two of Environment Canada's 15 Canadian ecozones, Arctic Cordillera and Northern Arctic, and three of Canada's 217 ecoregions (Ecological Stratification Working Group 1995; http://www.ecozones.ca/english/zone/index.html). The Baffin Island Coastal Lowlands and Baffin Island Mountains ecoregions are part of the Arctic Cordillera ecozone and the Baffin Island Uplands ecoregion part of the

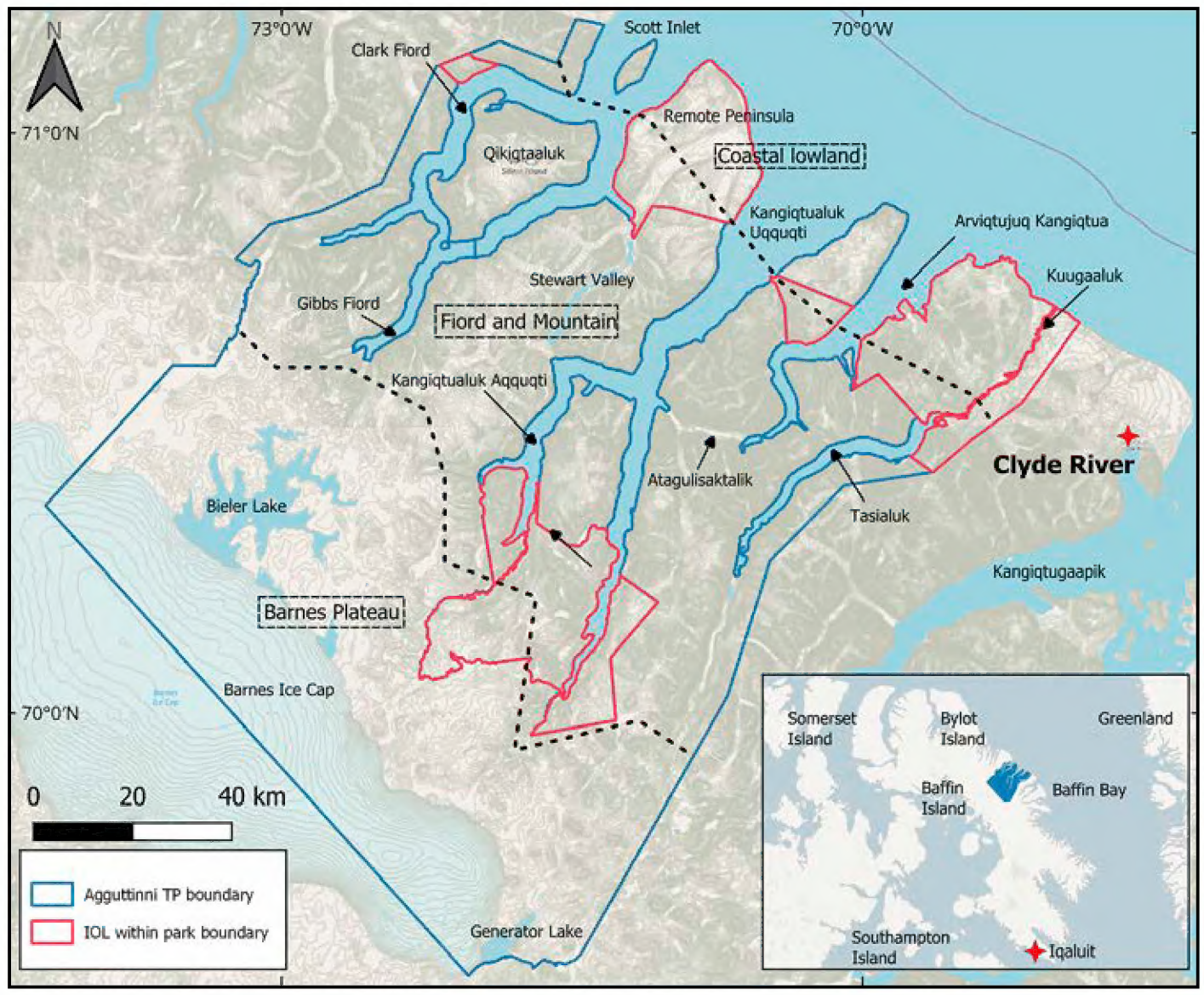


**Figure 1.** Map of Agguttinni Territorial Park showing the park boundary (blue line), Inuit Owned Land within the park boundary (red line), major geographical features, and the three zones (Coastal Lowland, Fiord and Mountain, Barnes Plateau).

Northern Arctic ecozone (Ecological Stratification Working Group 1995).

From a circumarctic perspective, the park lies within Bioclimatic subzone C, sometimes called the Middle Arctic zone, one of five Arctic Bioclimatic subzones (Elvebakk 1999; CAVM Team 2003; Walker et al. 2005; Elven et al. 2011). This subzone is characterized by a mean July temperature of 5–7 °C and a summer warmth index of 9–12 °C (sum of mean monthly temperatures greater than 0 °C) (CAVM Team 2003; Young 1971). According to this classification, the zonal lowland vegetation consists of two layers, a moss layer 3–5 cm thick and herbaceous layer 5–10 cm thick, with dwarf, mostly prostrate shrubs less than 15 cm tall, and local vascular plant floras with 75–150 species. Vegetation is open and patchy, with a vascular plant cover of 5–50% (CAVM Team 2003). In the mountains, vegetation changes with elevation; thus, vegetation at higher altitudes is more similar to the colder subzones B (about 650–1,000 m) and A (above about 1,000 m). Subzone B is characterized by a mean July temperature of 3–5 °C, a 5–25% cover of vascular plants, up to 60% cover of mosses and lichens, prostrate dwarf shrubs less than 5 cm tall, and local vascular floras with 50–100 species. Subzone A is characterized by a mean July temperature of 0–3 °C, less than 5% cover of vascular plants, up to 40% cover of mosses and lichens, vegetation mostly less than 2 cm tall with shrubs absent, and local vascular floras with fewer than 50 species.

The only published vegetation study that includes the park is the Circumarctic Vegetation Map (CAVM Team 2003; Walker et al. 2005). This large, but small-scale, map was created based on satellite photos along with fieldwork in some parts of the Arctic (ground truthing); no fieldwork was conducted on east central Baffin Island. Five major vegetation types were recognized within the park: 1) Prostrate dwarf-shrub tundra is dry tundra with patchy vegetation, dominated by prostrate shrubs (less than 5 cm high) such as *Dryas* L. spp. and *Salix arctica* Pall. 2) Prostrate/hemiprostrate dwarf-shrub tundra is moist to dry tundra dominated by prostrate and hemiprostrate shrubs less than 15 cm tall, with *Cassiope* D.Don. spp. often dominant. 3) Rush/grass-forb-cryptogam tundra is moist tundra with moderate to complete cover of very low-growing plants. 4) Cryptogam barren complex (bedrock) includes areas with extensive exposed bedrock covered in lichens, with dwarf shrub tundra between. 5) Noncarbonate mountain complex includes mountain vegetation on noncarbonate (i.e., acidic) bedrock, from tundra to mountain barrens depending on the elevation.

The park can be divided into three zones: Coastal Lowlands, Fiord and Mountain, and Barnes Plateau (Figure 1). These zones correspond to topography, which influences exposure, precipitation, and temperature, and which therefore influences species diversity and vegetation composition. The zones roughly correspond to the three ecoregions described above: Baffin Island Coastal Lowlands, Baffin Island Mountains, and Baffin Island Uplands.

The Coastal Lowlands zone includes flat coastal plains, as well as low hills and rolling terrain to about 300 m elevation (Figures 2, 3). Near the coast the substrate is typically sandy, and further inland it is stony or rocky. The zone is heavily influenced by the ocean, with high winds, frequent fog, and often cool summer

**Figure 2.** Coastal lowland zone. **A, B.** Coast between Niaqurnaaluk and Qassialuit (site 18.1). **A.** Sand beach with large hummocks of *Honckenya peploides* and *Luzula confusa*. **B.** Rocky sand slope with *Luzula confusa*, *Oxyria digyna*, and *Papaver* sp. **C.** Arviqtujuq Kangiqtua, northwest side near mouth. Cobble beach and rocky moss seepage slope (site 18.4). **D–F.** Kuugaaluk mouth. **D.** River mouth showing sand beach, lagoon, and in the foreground, coastal tundra (site 16.1). **E.** Sand beach (site 22.3) with scattered mounds of *Honckenya peploides* (Gillespie et al. 12456). **F.** South-facing sandy slope above lagoon (site 16.5), densely covered in *Salix arctica*, *S. herbacea*, and pale grey lichens, with snowbed community in background. Photos by L.J. Gillespie (A–C, E) and G.A. Levin (D, F).

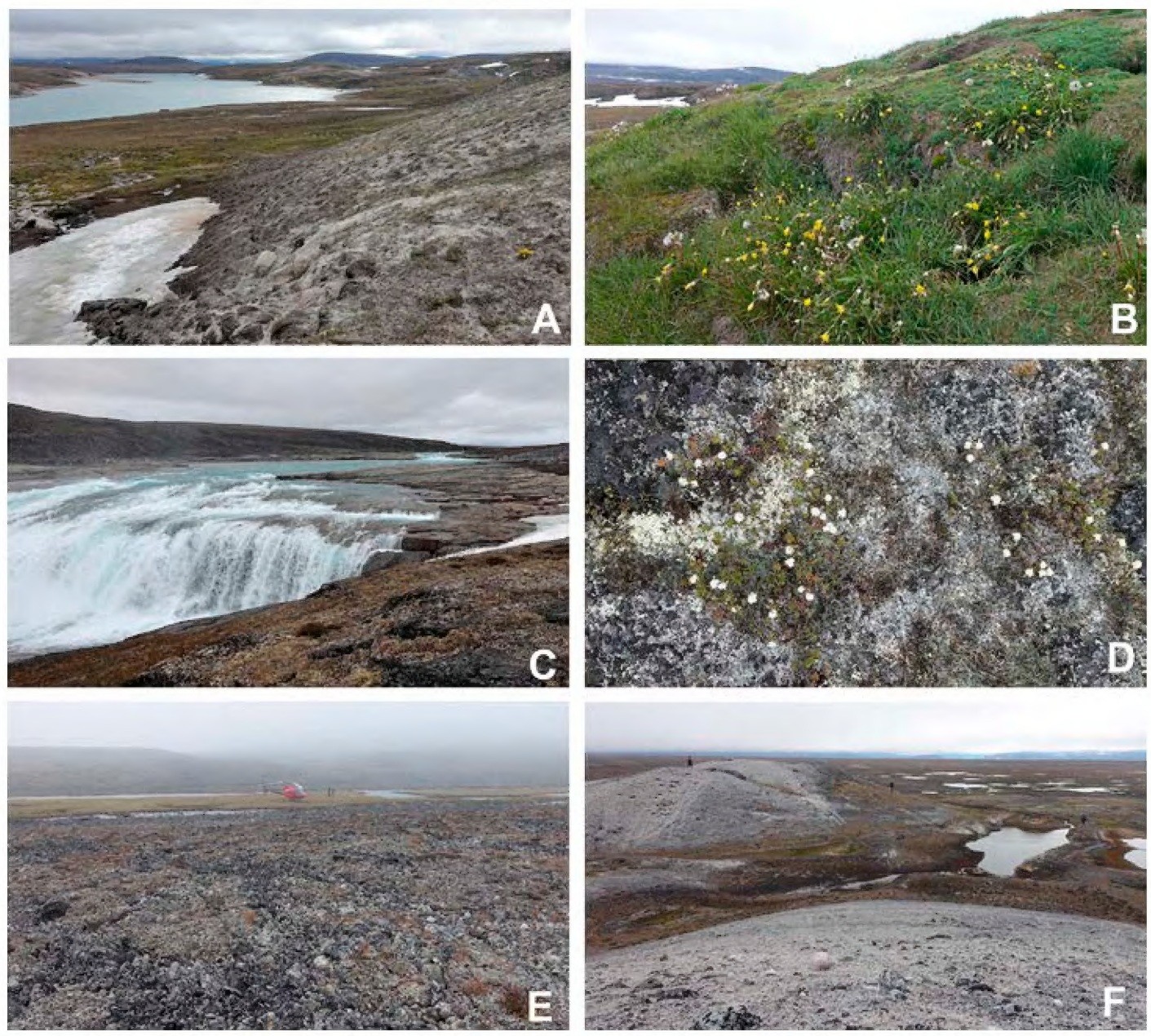


**Figure 3.** Coastal lowland zone. **A, B.** Kuugaaluk sand hills (site 19.4). **A.** Slope with dense crust of white lichen above melting snowbank, with scattered plants of *Festuca brachyphylla*, *Ranunculus nivalis* (yellow flowers), and *Salix herbacea*. **B.** Fox den supporting luxuriant growth of grasses and *Taraxacum ceratophorum* (*Gillespie et al. 12309*). **C, D.** Kuugaaluk waterfall. **C.** Cassiope-lichen-moss tundra adjacent to waterfall (site 19.1). **D.** Cassiope-moss-lichen tundra (site 19.2) with *Rhododendron tomentosum* subsp. *decumbens* (*Gillespie et al. 12293*). **E.** Barrens west of Kuugaaluk (site A22.1), lichen barrens on stony patterned ground, with sedge meadow along creek in background. **F.** Kames with lichen crust and mostly devoid of vascular plants, with ponds and wet meadows between (site 19.5). Photos by L.J. Gillespie.

temperatures. Exposed shorelines along Baffin Bay include sand beaches, cobble beaches, sand bluffs, and rocky outcrops (Figure 2A–E). Plants are mostly absent in the tidal zone, likely due to ice scouring. In the adjacent zone influenced by ocean spray and storm surges, plant communities range from typical tundra

to more unusual communities in diverse microhabitats (such as rock pools and large sandy hummocks) depending on the substrate, slope, and exposure (Figure 2A, B). The coastal zone is dissected by the large V-shaped mouths of three large fiord complexes, Scott Inlet and the mouths of Kangiqtualuk Uqquqti [Sam Ford Fiord], and Arviqtujuq Kangiqtua [Eglinton Fiord] into three areas: Remote Peninsula, a peninsula between the latter two fiords, and an extensive lowland area between Arviqtujuq Kangiqtua and Clyde River that includes Kuugaaluk [Kogalu River] (Figure 1). The long peninsula between the mouths of Arviqtujuq Kangiqtua and Kangiqtualuk Uqquqti is a barren, rolling rocky plateau (elevation 200–300 m, with hills to 400 m) bordered by steep slopes and cliffs (Figure 2C).

Kuugaaluk (which means "big river" in Inuktitut) is the largest river on the coastal lowlands and drains Tasialuk [Ayr Lake] (Figure 1). Its large valley widens to about 10 km wide near the ocean and is the remnant of a previous fiord. The Kuugaaluk mouth area includes diverse coastal habitats characterized by sand substrate and exposure to high winds, with plant communities having a very low growth form (Figure 2D–F). The terrain on either side of the river mouth is a flat stony sand terrace that ends in a steep sand bluff dropping 20 m to the ocean (Figure 2D). The main vegetation type here is tundra dominated by *Salix arctica*, becoming more densely vegetated and species diverse with distance from the cliff edge (Figure 2D). At its mouth the river widens to a lagoon, sheltered from the ocean by a broad sand spit with characteristic seashore plant communities (Figure 2D, E). South-facing slopes above the west side of the lagoon harbour interesting and diverse plant communities, including extensive areas of prostrate *Salix herbacea* L. and lichen crust and large snowbed communities (Figure 2F). Inland along the river are areas of sand bluffs and hills, rising 30–35 m above the river (Figure 3A, B). Steep, unstable, stony sand slopes are mostly devoid of plants and lichens but provide habitat for species tolerant of disturbance such as *Equisetum arvense* L. and *Puccinellia angustata* (R.Br.) E.L.Rand & Redfield. Less steep, stable slopes are covered in a dense crust of white lichen with abundant prostrate willows and moss (Figure 3A). Microhabitat diversity is high, and includes snowbed communities, nutrient-enriched animal denning areas, and wet meadows and drainage channels (Figure 3A–C).

Inland, away from the coast and river valleys, cryptogam barrens dominate on gently sloped or rolling, stony/rocky terrain. The barrens consist of patterned ground with patches or stripes of lichen-encrusted stony ground between lichen-covered rocky ground (Figure 3E). Plant cover is often less than 5%, sometimes more, and mostly restricted to the stony patches and stripes, with scattered moss (such as *Racomitrium lanuginosum* (Hedw.) Brid.) and often fewer than five vascular plant species, typically *Cassiope tetragona* (L.) D.Don and *Luzula confusa* Lindeb., and often with scattered *Anthoxanthum monticola* (Bigelow) Veldkamp and *Luzula nivalis* (Laest.) Spreng. Mossy sedge meadows are found in wetter areas along lake and pond margins and drainages (Figure 3E). Mosses, sedges, cotton-grass, and/or *Luzula* DC. spp. usually dominate, and scattered prostrate willows are often present. Adjacent lower slopes between the dry barrens and wet meadows may have 25–50% plant cover, with *Cassiope tetragona* and *Luzula* spp., usually dominant.

A small kame-and-kettle complex is a conspicuous feature of the otherwise flat coastal plain east of Kuugaaluk and was the only one observed in the Coastal Lowlands zone (Figure 3F). Kames and kettles are glacial features of conical hills (kames) of sand and gravel, with small ponds (kettles) between. The kames are covered in a lichen crust and are mostly devoid of vascular plants, except on the lowermost slopes and scattered on the lee side where a graminoid-willow community dominates.

The large Fiord and Mountain zone encompasses the spectacular high mountains, U-shaped glacial valleys, and deep fiords of Agguttinni TP (Figures 4–6). Rugged mountains reach 1,809 m elevation (Ukpik Peak). Extensive elevation, aspect, and climatic (temperature, moisture, solar exposure) differences result in high habitat diversity. Three large fiord systems, oriented northeast-southwest, extend inland 50 to over 100 km from the ocean towards the Barnes Plateau. The Kangiqtualuk Uqquqti [Sam Ford Fiord] system in the centre of the park is the longest (120 km) and includes a large side branch called Kangiqtualuk Agguqti [Walker Arm] Northward is the interconnected Clark and Gibbs fiord system, and to the east lies Arviqtujuq Kangiqtua [Eglinton Fiord]. Farther to the southeast is a long inland lake, Tasialuk [Ayr Lake], remnants of an ancient fiord dating from a time when sea level was higher. The sides of the fiords and Tasialuk are mostly sheer cliffs or, further inland, very steep slopes.

Several large valleys are conspicuous features of the outer half of the Fiord and Mountain zone. Atagulisaktalik [Revoir Pass] is a 17 km long east–west oriented, U-shaped valley connecting two fiords, Arviqtujuq Kangiqtua and Kangiqtualuk Uqquqti (Figure 4A, B). The valley rises gently from the east to a flat pass with lakes and sedge meadows at about 50–100 m, before descending very gradually to Swiss Bay. Stewart Valley is a spectacular, narrow, steep-sided valley connecting Kangiqtualuk Agguqti and Gibbs Fiord, with an elongate lake occupying most of the valley floor (Figure 4C, D). It is likely a remnant of a former large fiord, which would also have included part of Kangiqtualuk Agguqti and a broad valley on Remote Peninsula. The latter valley, about 20 km long and 3–4 km wide, connects Refuge Harbour with Remote Lake and the coast (Figure 4E). Because it is exposed to the coast, strong winds funnel down the valley, resulting in weather that is often cold, windy, and wet, thus more similar to coastal areas. Some smaller sheltered side valleys penetrate the sheer cliffs of the fiords (Figures 4G, H, 5A). The terrain in these large and smaller valleys is mostly rocky with glacial erratic boulders common. The dominant vegetation on the floor and lower slopes of the large valleys is typically moist hummocky *Cassiope*-moss-lichen tundra (Figure

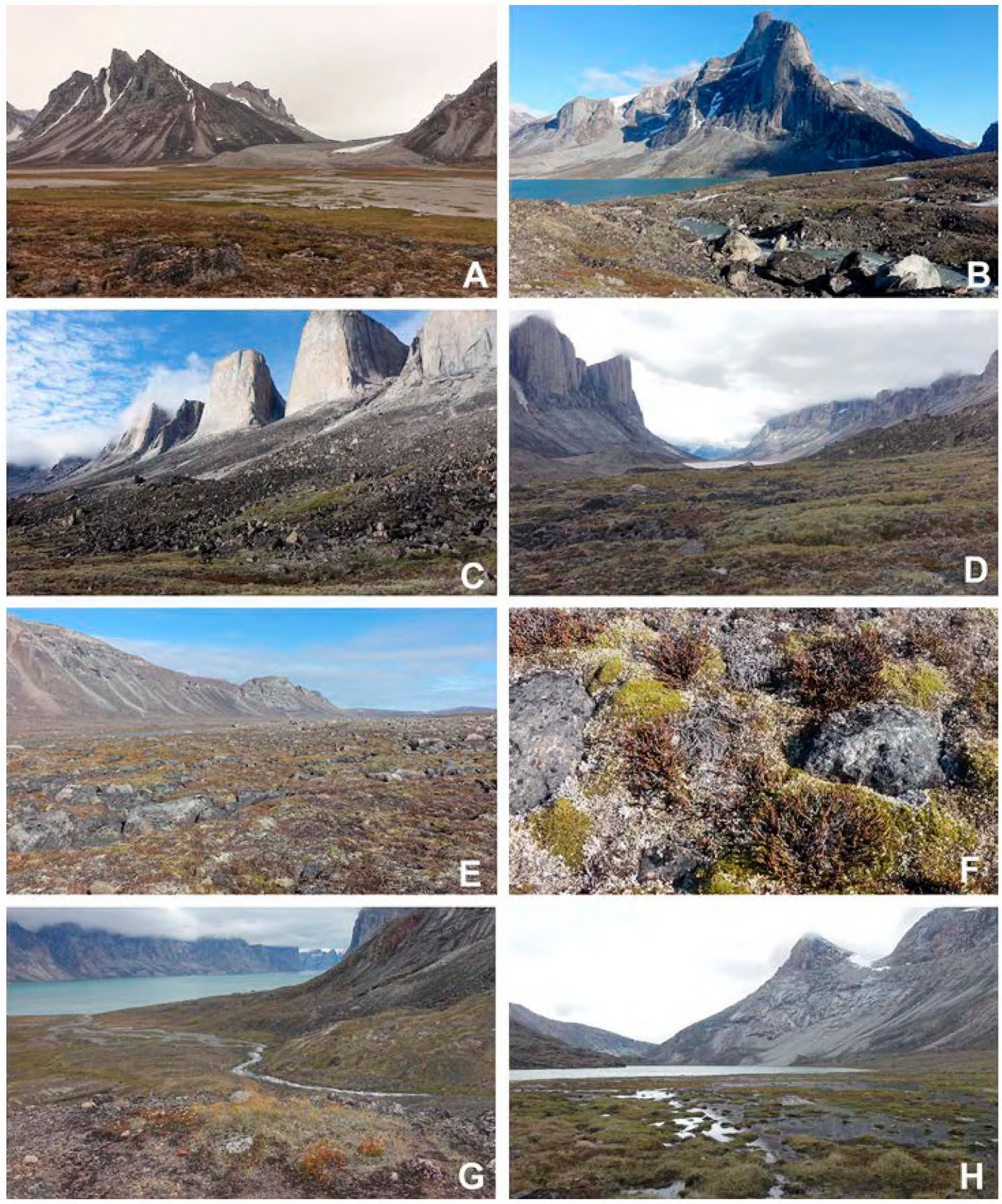


**Figure 4.** Fiord and Mountain zone. **A–B.** Atagulisaktalik. **A.** Sedge meadow at pass, hummocky *Cassiope*-moss-lichen rocky tundra on slope in foreground. **B.** River near head of Arviqtujuq Kangiqtua (site 23.10). **C–D.** Stewart Valley (site 15.1). **C.** Rocky slope with *Cassiope*-graminoid-lichen tundra and talus. **D.** Rocky tundra with abundant graminoids. **E–F.** Refuge Harbour. **E.** Broad rocky valley with *Cassiope*-moss-lichen tundra. **F.** Closeup of *Cassiope*-moss-lichen tundra (site 11.1). **G–H.** Tingijattut, valley at south end of bay on Kangiqtualuk Agguqti. **G.** Dense growth of *Anthoxanthum monticola* and *Saxifraga tricuspidata* (*Gillespie et al. 12165*), on top of low, mostly bare hill (site 15.5), with sedge meadow along braided river beyond. **H.** Wet hummocky sedge-willow-moss meadow along large lake near outlet (site 15.2). Photos by L.J. Gillespie

4A, F), with *Cassiope*-sedge-lichen tundra often covering drier south-facing slopes. Wet depressions, lake and pond shores, riverbanks, boulder-cobble fields along braided streams, rock outcrops, and talus slopes provide a diversity of microhabitats (Figures 4C, G, 5B, C, G, H). In the smaller valleys, habitat diversity is high, often with no single plant community dominating.

Large, sheltered valleys extend south to southwest from the heads of the fiords (Figures 5D–H, 6A–F). At the head of Kangiqtualuk Uqquqti is a broad valley, 5 km long and about 1.5 km wide (Figure 5D); the valley then narrows abruptly and becomes canyon-like as it rises to the Barnes Plateau. Within the valley, the Sam Ford River is broad and winding with a large sand-cobble delta about 1 km across; multiple levels of large flat terraces are found on the south side of the river, and to a lesser extent on the north side (Figure 5D, E). At the head of the main arm of Kangiqtualuk Agguqti is a long, flat-bottomed, steep sided valley, 0.6–1.3 km wide and extending about 20 km inland before it narrows to a canyon in the Barnes Plateau. Shorter flat-bottomed, steep-sided valleys lie at the heads of Clark and Gibbs fiords (Figure 6E, F). Extending south from the south end of Tasialuk is a long, steep-sided valley, about 24 km long and 0.5–1 km wide (Figure 6G). The long valleys may be divided into several distinctive sections. For example, the Tasialuk valley has a 2 km long sand delta and lowermost river flats, mostly devoid of vegetation, a 4 km long section of densely vegetated tundra and sedge meadows, extensive sand flats along a braided river 6 km long, and an area 7 km long of extensive polygon patterned terraces (Figure 6G, H). Similarly, the valley at the head of Kangiqtualuk Agguqti has a delta area of extensive tidal sand flats devoid of terrestrial vegetation, sparsely vegetated, flat stony-cobble sand terraces, polygon patterned terraces, and terraces with dry sedge tundra on the valley floor (Figure 6B, D). The large sand-cobble delta at the head of Kangiqtualuk Uqquqti is slightly higher and mostly not tidal, in contrast to the previous two deltas, and has an interesting but very sparse plant cover (less than 1%) (Figure 5E). Lower slopes and side valleys of these large interior valleys are typically covered in densely vegetated rocky tundra, with multiple dominants depending on the

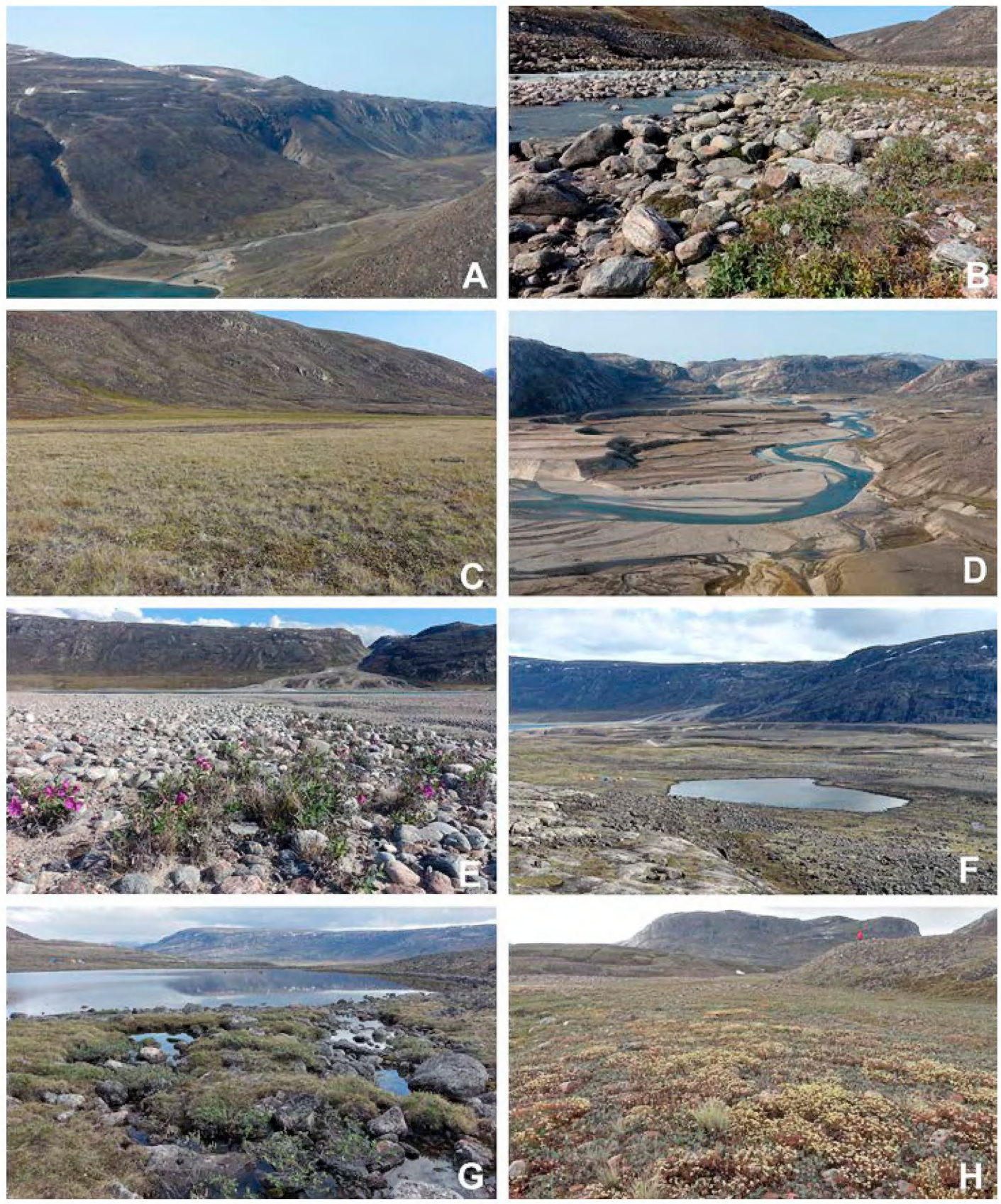


**Figure 5.** Fiord and Mountain zone. **A–C.** Clark Fiord, side valley on northwest side. **A.** Aerial view of valley. **B.** Sandy cobble river flats with *Chamaenerion latifolium* and *Saxifraga tricuspidata* (site 20.1). **C.** Densely vegetated *Salix*-graminoid meadow along stream on lower slope of valley (site 20.3), with *Oxyria digyna*, *Pyrola grandiflora*, and *Taraxacum ceratophorum* (*Gillespie et al. 12364*). **D–H.** Kangiqtualuk Uqquqti head. **D.** Sam Ford River valley from near delta; camp located in broad side valley on right. **E.** Sand-cobble delta flats (site 30.6) with *Chamaenerion latifolium* and *Poa hartzii* (*Gillespie et al. 11729*). **F.** Base camp by a small lake (27.1) in broad basin-like side valley. **G.** *Salix richardsonii* along rocky stream near lake. **H.** Densely vegetated cobble sand river flat (site 29.4) with abundant *Chamaenerion latifolium* and *Saxifraga tricuspidata*. Photos by L.J. Gillespie

slope and aspect, including *Cassiope tetragona*, *Carex* spp., *Dryas integrifolia* Vahl, *Salix arctica*, *Vaccinium uliginosum* L., mosses, and lichens (Figures 5F, 6A). River flats and banks, terrace slopes, pond and lake margins, side valleys cut into the terraces, snow beds, cliffs, and rock outcrops provide additional abundant habitat diversity (Figures 5D, G, 6A, C, D, H).

The Barnes Plateau is an extensive upland area, covering about a third of the park between the Barnes Ice Cap and the Fiord and Mountain zone (Figure 7). Elevation is mostly 400–600 m, lowest in the southern part, with some hills rising to just over 700 m at the northern end. The Barnes Ice Cap covers an area of about 6,000 km$^2$; about one third of the ice cap is included within the park. The ice cap is presently receding, leaving a band of recently deglaciated, mostly bare ground of sand and unsorted rock (pebbles to small boulders) (Figure 7A, B). Several very large glacial meltwater lakes (Conn, Bieler, and Generator lakes) and numerous smaller ones border the ice cap. Generator Lake has an extensive recently exposed shoreline indicating that the lake level has dropped approximately 10 m (Figure 7C). The plateau is covered in many small lakes and rivers and is the source of the large rivers that drain into the heads of the fiords. Glacial landform features, such as moraines and eskers, are common (Figure 7D). Eskers are long winding ridges of glacial-deposited sand and gravel presumed to be formed by streams under or within a glacier, and often have an interesting diverse flora different from the surrounding area. The terrain is very rocky and the vegetation extremely sparse. The plateau is mostly covered in rocky barrens with less than 1% vascular plant cover and extremely low vascular plant species diversity (fewer than 10 species, often only 1–4, at each site) (Figure 7E). Lichens and moss are abundant, and the dominant vascular plants are *Luzula* spp. and *Cassiope tetragona*. *Micranthes foliolosa* (R.Br.) Gornall, *Phippsia algida* (Sol.) R.Br., *Poa arctica* R.Br., *Saxifraga cespitosa* L., and/or *S. rivularis* L. may sometimes be present typically in moist sites. The plateau is also dotted with numerous, often small, green meadows in low-lying alluvial areas along lake margins and rivers (Figure 7G, H). The meadows and adjacent slopes are more densely vegetated and often more species diverse than the rocky barrens; they provide important summer habitat for wildlife such as caribou.

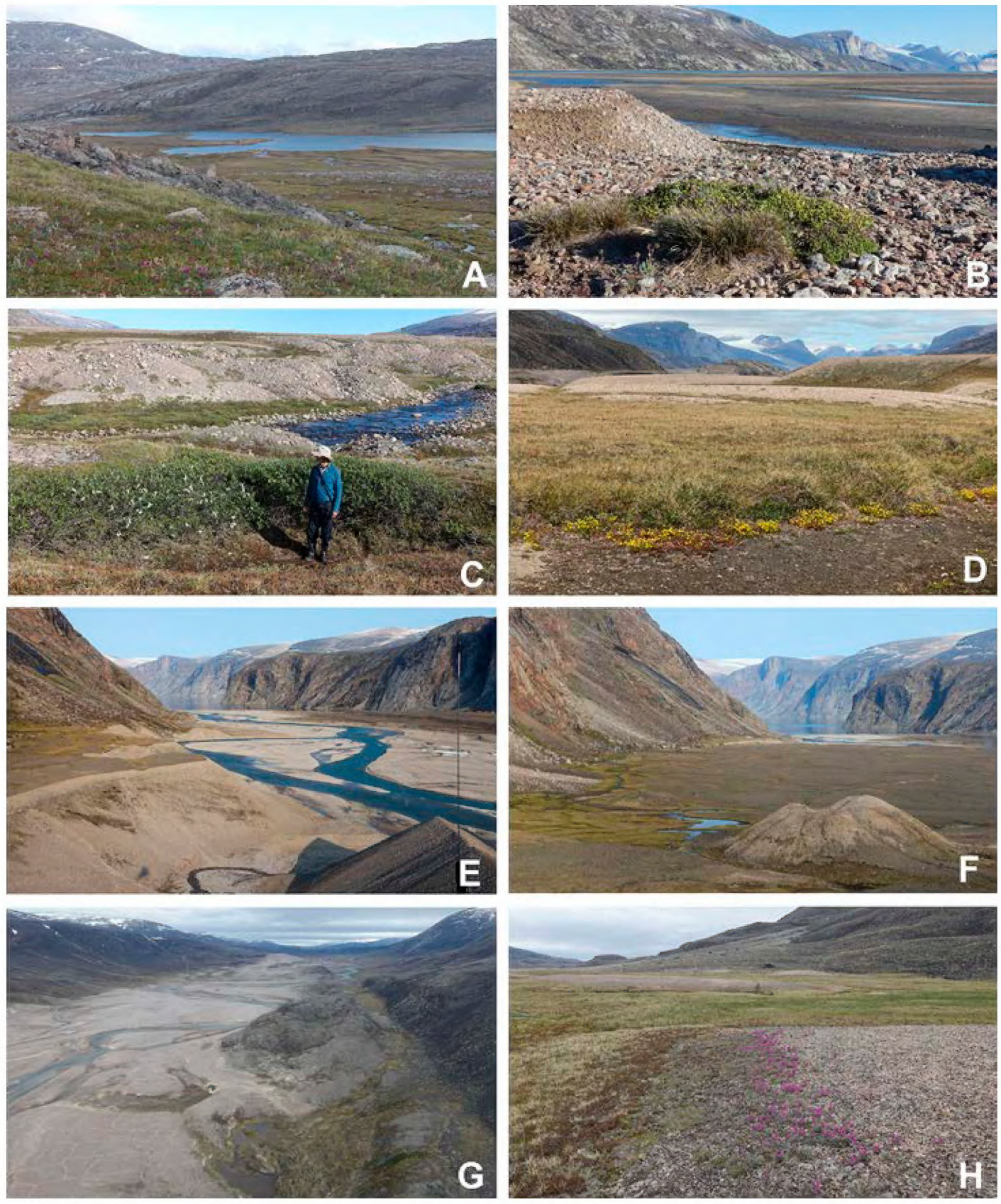


**Figure 6.** Fiord and Mountain zone. **A–D.** Kangiqtualuk Agguqti head. **A.** Densely vegetated slope with *Chamaenerion latifolium*, *Pyrola grandiflora*, and *Vaccinium uliginosum* (site 3.6), and sedge meadows in small valley and along lake (note basecamp on dry stony point). **B.** Stony sand terrace with *Honckenya peploides*, *Poa hartzii*, *Potentilla pulchella*, and *Silene acaulis* (site 8.1), tidal sand flats on delta in background. **C.** Large shrubs of *Salix richardsonii* in side valley (site 8.2). **D.** Dry sedge tundra, with *Saxifraga aizoides* (*Gillespie et al. 11963*) along border of mostly dry pond bed (site 8.5). **E–F.** Gibbs Fiord head. **E.** Lower part of valley showing sand flats along river and delta. **F.** Flat-bottomed valley with polygon patterned ground, sedge meadows and kame in foreground (site 20.9). **G–H.** Tasialuk, south end. **G.** River valley with polygon-patterned terraces. **H.** Polygon terrace and sedge meadow, with bands of *Chamaenerion latifolium*, *Dryas integrifolia*, and *Cassiope tetragona* on slope in transition zone (site 26.5). Photos by L.J. Gillespie.

## METHODS

**2021 Fieldwork.** Fieldwork in Agguttinni TP was conducted between July 22 and August 22, 2021. This period included most of the peak flowering period and all the peak fruiting period during the short Arctic growing season. Our field team comprised L.J. Gillespie (team leader), P.C. Sokoloff, and G.A. Levin. The team was accompanied in the field by two polar bear monitors from Clyde River, Jaypiti Inutiq and Leeno Apak. Research was conducted in partnership with Nunavut Parks and Special Places under Nunavut Department of Environment Wildlife Research Permit WL 2021-038. Permission to access Inuit Owned Land within the park boundary was granted by the Qikiqtani Inuit Association under Land Use Permit QL1-2105. The status of this Inuit Owned Land (outlined in red in Figures 1, 8, 9), whether part of the territorial park or as a separate reserve or park, has not yet been decided. For the purposes of this study, this land is considered within Agguttinni TP.

Topographical, geological, and surficial geology maps, as well as satellite images (Zoom Earth, Google Earth) were used to decide on field camp locations and helicopter day trip destinations, and generally to direct our search effort. Field camp locations were chosen to maximize geographical and habitat coverage of Agguttinni TP and to target areas anticipated to have high habitat and species diversity. At each camp we surveyed plants first in the vicinity of camp and then at more distant sites accessed by foot, with the goal of covering as many habitats and plant communities as possible. Helicopter day trips were planned to include a diversity of rock substrates, geomorphological features (e.g., eskers, kames, and deltas),. elevation, and vegetation. Destinations were also influenced by logistical realities such as weather and distance.

We established four field camps in Agguttinni TP: 1) Atagulisaktalik [Revoir Pass], east side, 70°29′15″N, 070°39′00″W, elev. 100 m, July 22–27; 2) head of Kangiqtualuk Uqquqti [Sam Ford Fiord], Sam Ford River valley, 3 km west of river mouth, 70°01′54″N, 071°37′05″W, elev. 125 m, July 27–August 3; 3) Kangiqtualuk

**Figure 7.** Barnes Plateau. **A.** Barnes Ice Cap with adjacent band of recently deglaciated ground. **B.** Deglaciated zone adjacent to Barnes Ice with large mounds of old moss and devoid of lichens (site 31.4). **C.** Generator Lake, recently exposed shoreline with green moss meadows (site 31.9). **D–E.** Esker on Barnes Plateau (site 20.12). **D.** Esker with sparsely vegetated ridge and moderately vegetated lower slopes. **E.** Rocky barrens near esker, mostly devoid of plants. **F–G.** Marble Lake. **F.** White marble outcrop on ridge with granite erratic (site 31.1), with *Anthoxanthum monticola*, *Cassiope tetragona*, *Salix arctica*, and abundant lichen on upper slope, and dense *Cassiope* in shelter of outcrop. **G.** Wet meadow along lakeshore dominated by mosses and heavily grazed sedges (site 31.2). **H.** Sand hills and bluffs along river (site 31.6), with *Luzula confusa* and *Papaver lapponicum* (*Gillespie et al. 11766*), with snowbeds and meadows along river in background. Photos by L.J. Gillespie (A–D, F, G) and P.C. Sokoloff (E).

Agguqti [Walker Arm], north shore of lake, 3.2 km west of fiord head, 70°17′31″N, 071°57′08″W, elev. 125 m, August 3–9; and 4) Refuge Harbour, 70°52′59″N, 071°07′36″W, elev. 180 m, August 11–15 (Figures 8, 9). All travel to and between base camps was by helicopter.

We made 10 daytrips by helicopter, one each from the first three camps, one on the return trip from Refuge Harbour camp to the hamlet of Clyde River, and six from Clyde River. Frequent poor weather, including fog in Clyde River, limited both the availability of the helicopter and, when based in Clyde River, the distance and altitude flown. At each helicopter stop we generally surveyed one to three distinct collection sites. At five stops we were dropped off, explored the area on foot for one to four hours, and were picked up at a different location. These stops included multiple collection sites: Kangiqtualuk Agguqti – valley, 8 August, stops 2 (four sites, 8.2–8.5) and 3 (five sites, 8.6–8.10), 21 August (11 sites, 21.1–21.11); Tingijattut, 15 August, (nine sites, 15.2–15.10); and Clark Fiord, 20 August (eight sites, 20.1–20.8).

We surveyed 23 main localities in Agguttinni TP, including seven in the Coastal Lowland zone, 11 in the Fiord and Mountain zone, and five on the Barnes Plateau, and made collections at 165 sites (Table 1). Collection sites are numbered in the order visited, with the day of the month followed by a site number for that day. Since collections were made on both July 22 and August 22, those made on the latter date are designated A22. All 2021 collection localities and sites are shown on maps in Figures 8 and 9.

In the coastal lowland zone, we surveyed several localities along Kuugaaluk, the mouth of Arviqtujuq Kangiqtua, three interior sites, and one ocean site in a broad bay. Foggy weather did not permit surveying the Coastal Lowlands part of the Remote Peninsula, which includes the large Remote Lake, nor the area of Scott Inlet. Along and near Kuugaaluk we surveyed the river mouth (sites 16.1–16.7, A22.3; Figure 2D–F), two localities along the river (waterfall, 19.1–19.3; sand hills, 19.4; Figure 3A–D), as well as a kame-and-kettle complex 4 km southeast of the mouth (16.8, 19.5; Figure 3F) and coastal barrens 5 and 7.5 km southwest of the mouth (A22.1, A22.2; Figure 3E). The Niaqurnaaluk-Qassialuit locality is located on Baffin Bay between

**Table 1.** Gillespie et al. 2021 collection localities and sites in Agguttinni Territorial Park, ordered alphabetically by main locality and then site number. For each site, the site number, date, location (former names and geographic features in square brackets), elevation, and coordinates are provided.

| Site | Date | Location | Coordinates |
|---|---|---|---|
| **Arviqtujuq Kangiqtua NW** | | | |
| 18.3 | 18 Aug 2021 | East coast of peninsula on northwest side of Arviqtujuq Kangiqtua [Eglinton Fiord], opposite Ravenscraig Harbour. Elev. 30 m. | 70°46′21″N, 69°54′6″W |
| 18.4 | 18 Aug 2021 | East coast of peninsula on northwest side of Arviqtujuq Kangiqtua [Eglinton Fiord], opposite Ijjuq [cape]. Elev. 10 m. | 70°42′28″N, 70°2′27″W |
| **Atagulisaktalik** | | | |
| 22.1 | 22 Jul 2021 | Atagulisaktalik [Revoir Pass], 2.2 km west of river mouth on Arviqtujuq Kangiqtua, north side of valley. Elev. 100 m. | 70°29′15″N, 70°39′0″W |
| 22.2 | 22 Jul 2021 | Atagulisaktalik [Revoir Pass], 2.2 km west of river mouth on Arviqtujuq Kangiqtua, north side of valley. Elev. 100 m. | 70°29′16″N, 70°38′54″W |
| 22.3 | 22 Jul 2021 | Atagulisaktalik [Revoir Pass], 2.3 km west of river mouth on Arviqtujuq Kangiqtua, north side of valley. Elev. 105 m. | 70°29′20″N, 70°39′18″W |
| 23.1 | 23 Jul 2021 | Atagulisaktalik [Revoir Pass], 2.0 km west-northwest of river mouth on Arviqtujuq Kangiqtua, north side of valley. Elev. 125 m. | 70°29′27″N, 70°38′31″W |
| 23.2 | 23 Jul 2021 | Atagulisaktalik [Revoir Pass], 2.1 km west-northwest of river mouth on Arviqtujuq Kangiqtua, north side of valley. Elev. 150 m. | 70°29′32″N, 70°38′18″W |
| 23.3 | 23 Jul 2021 | Atagulisaktalik [Revoir Pass], 2.0 km west-northwest of river mouth on Arviqtujuq Kangiqtua, north side of valley. Elev. 185 m. | 70°29′35″N, 70°38′4″W |
| 23.4 | 23 Jul 2021 | Atagulisaktalik [Revoir Pass], 1.8 km west-northwest of river mouth on Arviqtujuq Kangiqtua, north side of valley. Elev. 130 m. | 70°29′31″N, 70°37′52″W |
| 23.5 | 23 Jul 2021 | Atagulisaktalik [Revoir Pass], 0.9 km west-northwest of river mouth on Arviqtujuq Kangiqtua, north side of valley. Elev. 80 m. | 70°29′6″N, 70°36′56″W |
| 23.6 | 23 Jul 2021 | Atagulisaktalik [Revoir Pass], 0.6 km west of river mouth on Arviqtujuq Kangiqtua, north side of river. Elev. 70 m. | 70°29′1″N, 70°36′32″W |
| 23.7 | 23 Jul 2021 | Atagulisaktalik [Revoir Pass], 0.4 km west of river mouth on Arviqtujuq Kangiqtua, north side of river. Elev. 40 m. | 70°28′55″N, 70°36′23″W |
| 23.8 | 23 Jul 2021 | Atagulisaktalik [Revoir Pass], 0.3 km west of river mouth on Arviqtujuq Kangiqtua, north side of river. Elev. 25 m. | 70°28′51″N, 70°36′13″W |
| 23.9 | 23 Jul 2021 | Atagulisaktalik [Revoir Pass], near river mouth at Arviqtujuq Kangiqtua. Elev. 2–5 m. | 70°28′47″N, 70°35′58″W |
| 23.10 | 23 Jul 2021 | Atagulisaktalik [Revoir Pass], 0.4 km west of river mouth at Arviqtujuq Kangiqtua [formerly Eglinton Fiord], on north side of river. Elev. 40 m. | 70°28′52″N, 70°36′34″W |
| 23.11 | 23 Jul 2021 | Atagulisaktalik [Revoir Pass], 0.8 km west of river mouth at Arviqtujuq Kangiqtua [formerly Eglinton Fiord], on north side of river. Elev. 55 m. | 70°28′56″N, 70°37′4″W |
| 23.12 | 23 Jul 2021 | Atagulisaktalik [Revoir Pass], 1.1 km west of river mouth at Arviqtujuq Kangiqtua [formerly Eglinton Fiord], on north side of river. Elev. 60 m. | 70°29′2″N, 70°37′29″W |
| 23.13 | 23 Jul 2021 | Atagulisaktalik [Revoir Pass], 2.1 km west-northwest of river mouth on Arviqtujuq Kangiqtua, north side of valley. Elev. 150 m. | 70°29′31″N, 70°38′18″W |
| 24.1 | 24 Jul 2021 | Atagulisaktalik [Revoir Pass], north side of valley opposite East Pioneer Glacier. Elev. 110 m. | 70°29′21″N, 70°41′56″W |
| 24.2 | 24 Jul 2021 | Atagulisaktalik [Revoir Pass], north side of valley opposite East Pioneer Glacier. Elev. 110 m. | 70°29′21″N, 70°42′11″W |
| 24.3 | 24 Jul 2021 | Atagulisaktalik [Revoir Pass], north side of valley opposite East Pioneer Glacier. Elev. 110 m. | 70°29′19″N, 70°42′24″W |
| 24.4 | 24 Jul 2021 | Atagulisaktalik [Revoir Pass], north side of valley opposite East Pioneer Glacier. Elev. 110 m. | 70°29′18″N, 70°42′39″W |
| 24.5 | 24 Jul 2021 | Atagulisaktalik [Revoir Pass], north side of valley opposite east end of Revoir Mountain and East Pioneer Glacier. Elev. 140 m. | 70°29′33″N, 70°44′15″W |
| 24.6 | 24 Jul 2021 | Atagulisaktalik [Revoir Pass], north side of valley opposite east end of Revoir Mountain and East Pioneer Glacier. Elev. 185 m. | 70°29′38″N, 70°43′33″W |
| 25.1 | 25 Jul 2021 | Atagulisaktalik [Revoir Pass], 2.2 km west of river mouth on Arviqtujuq Kangiqtua, north side of valley. Elev. 100 m. | 70°29′16″N, 70°39′6″W |
| **Barnes Plateau S – Generator Lake** | | | |
| 31.8 | 31 Jul 2021 | Barnes Plateau, east shore of Generator Lake, at narrows midway along lake. Elev. 400 m. | 69°35′7″N, 71°48′49″W |
| 31.9 | 31 Jul 2021 | Barnes Plateau, east shore of Generator Lake, at narrows midway along lake. Elev. 400 m. | 69°35′8″N, 71°48′36″W |
| **Barnes Plateau S – ice cap edge** | | | |
| 31.4 | 31 Jul 2021 | Barnes Plateau, east edge of Barnes Ice Cap, ca. 6 km west-northwest of Gee Lake. Elev. 530 m. | 69°52′18″N, 72°27′22″W |
| **Barnes Plateau S – meadow/hills** | | | |
| 31.5 | 31 Jul 2021 | Barnes Plateau, between Barnes Ice Cap and Generator Lake, ca. 4 km west of north end of Generator Lake. Elev. 470 m. | 69°39′3″N, 71°49′41″W |
| 31.6 | 31 Jul 2021 | Barnes Plateau, between Barnes Ice Cap and Generator Lake, ca. 4 km west of north end of Generator Lake. Elev. 480 m. | 69°39′11″N, 71°49′50″W |
| 31.7 | 31 Jul 2021 | Barnes Plateau, between Barnes Ice Cap and Generator Lake, ca. 4 km west of north end of Generator Lake. Elev. 470 m. | 69°39′5″N, 71°49′32″W |

**Table 1.** Continued.

| Site | Date | Location | Coordinates |
|---|---|---|---|
| **Clark Fiord** | | | |
| 20.1 | 20 Aug 2021 | Valley on west side of Clark Fiord, opposite Ullainnagaq [cape] on Qikiqtaaluk [island], 2 km northwest of river mouth, east side of river. Elev. 70 m. | 71°6′0″N, 72°7′7″W |
| 20.2 | 20 Aug 2021 | Valley on west side of Clark Fiord, opposite Ullainnagaq [cape] on Qikiqtaaluk [island], 1.9 km northwest of river mouth, east side of river. Elev. 80 m. | 71°6′0″N, 72°6′55″W |
| 20.3 | 20 Aug 2021 | Valley on west side of Clark Fiord, opposite Ullainnagaq [cape] on Qikiqtaaluk [island], 1.8 km northwest of river mouth, northeast side of valley. Elev. 140 m. | 71°6′2″N, 72°6′33″W |
| 20.4 | 20 Aug 2021 | Valley on west side of Clark Fiord, opposite Ullainnagaq [cape] on Qikiqtaaluk [island], 1.8 km northwest of river mouth, northeast side of valley. Elev. 125 m. | 71°5′57″N, 72°6′22″W |
| 20.5 | 20 Aug 2021 | Valley on west side of Clark Fiord, opposite Ullainnagaq [cape] on Qikiqtaaluk [island]. Elev. 110 m. | 71°5′54″N, 72°6′22″W |
| 20.6 | 20 Aug 2021 | Valley on west side of Clark Fiord, opposite Ullainnagaq [cape] on Qikiqtaaluk [island], 1.4 km northwest of river mouth, northeast side of valley. Elev. 75 m. | 71°5′45″N, 72°6′15″W |
| 20.7 | 20 Aug 2021 | Valley on west side of Clark Fiord, opposite Ullainnagaq [cape] on Qikiqtaaluk [island], 1.4 km northwest of river mouth, northeast side of valley. Elev. 90 m. | 71°5′46″N, 72°6′10″W |
| 20.8 | 20 Aug 2021 | Valley on west side of Clark Fiord, opposite Ullainnagaq [cape] on Qikiqtaaluk [island], 1.1 km northwest of river mouth, northeast side of valley. Elev. 75 m. | 71°5′37″N, 72°6′1″W |
| **Gibbs esker** | | | |
| 20.12 | 20 Aug 2021 | Barnes Plateau, esker east of Erik River canyon on west side of tributary river, 7.3 km south of mouth of Eric River at head of Gibbs Fiord. Elev. 550 m. | 70°32′58″N, 72°33′2″W |
| **Gibbs Fiord** | | | |
| 20.9 | 20 Aug 2021 | Tay River valley at head of Gibbs Fiord, kame 3.3 km west of head of fiord, north side of river. Elev. 150–170 m. | 70°37′51″N, 72°42′55″W |
| 20.10 | 20 Aug 2021 | Tay River valley at head of Gibbs Fiord, 3.2 km west of head of fiord, north side of river, northeast of kame. Elev. 150 m. | 70°37′53″N, 72°42′46″W |
| 20.11 | 20 Aug 2021 | Tay River delta at head of Gibbs Fiord. Elev. 5 m. | 70°38′0″N, 72°37′48″W |
| **Kangiqtualuk Agguqti – camp** | | | |
| 3.1 | 3 Aug 2021 | 3.2 km west of head of Kangiqtualuk Agguqti [Walker Arm], north shore of lake, west-northwest of Akuliqutaaluk [mountain]. Elev. 180 m. | 70°17′31″N, 71°57′8″W |
| 3.2 | 3 Aug 2021 | 3.3 km west of head of Kangiqtualuk Agguqti [Walker Arm], north side of lake, west-northwest of Akuliqutaaluk [mountain]. Elev. 215 m. | 70°17′43″N, 71°57′16″W |
| 3.3 | 3 Aug 2021 | 3.6 km west of head of Kangiqtualuk Agguqti [Walker Arm], north side of lake, west-northwest of Akuliqutaaluk [mountain]. Elev. 225 m. | 70°17′43″N, 71°57′52″W |
| 3.4 | 3 Aug 2021 | 4.0 km west of head of Kangiqtualuk Agguqti [Walker Arm], north of lake, west-northwest of Akuliqutaaluk [mountain]. Elev. 240 m. | 70°17′46″N, 71°58′24″W |
| 3.5 | 3 Aug 2021 | 4.0 km west of head of Kangiqtualuk Agguqti [Walker Arm], north of lake, west-northwest of Akuliqutaaluk [mountain]. Elev. 255 m. | 70°17′50″N, 71°59′4″W |
| 3.6 | 3 Aug 2021 | 3.8 km west of head of Kangiqtualuk Agguqti [Walker Arm], north of lake, west-northwest of Akuliqutaaluk [mountain]. Elev. 245 m. | 70°17′53″N, 71°58′11″W |
| 5.1 | 5 Aug 2021 | 2.7 km west of head of Kangiqtualuk Agguqti [Walker Arm], northeast end of lake at outlet, west-northwest of Akuliqutaaluk [mountain]. Elev. 185 m. | 70°17′37″N, 71°56′23″W |
| 5.3 | 5 Aug 2021 | 1.9 km west of head of Kangiqtualuk Agguqti [Walker Arm], north side of river valley, west-northwest of Akuliqutaaluk [mountain]. Elev. 160 m. | 70°17′32″N, 71°55′4″W |
| 5.4 | 5 Aug 2021 | 1.7 km west of head of Kangiqtualuk Agguqti [Walker Arm], north side of river valley, west-northwest of Akuliqutaaluk [mountain]. Elev. 150 m. | 70°17′29″N, 71°54′46″W |
| 5.5 | 5 Aug 2021 | 3 km west of head of Kangiqtualuk Agguqti [Walker Arm], northeast end of lake near outlet, west-northwest of Akuliqutaaluk [mountain]. Elev. 180 m. | 70°17′34″N, 71°56′48″W |
| 6.1 | 6 Aug 2021 | 0.7 km west of head of Kangiqtualuk Agguqti [Walker Arm], north side of river valley, west-northwest of Akuliqutaaluk [mountain]. Elev. 140 m. | 70°17′42″N, 71°53′10″W |
| 6.2 | 6 Aug 2021 | 0.5 km west of head of Kangiqtualuk Agguqti [Walker Arm], north side of river valley, west-northwest of Akuliqutaaluk [mountain]. Elev. 120 m. | 70°17′45″N, 71°52′49″W |
| 6.3 | 6 Aug 2021 | Head of Kangiqtualuk Agguqti [Walker Arm], coast near river mouth, northwest of Akuliqutaaluk [mountain]. Elev. 0–30 m. | 70°17′42″N, 71°52′3″W |
| 6.4 | 6 Aug 2021 | 0.4 km west of head of Kangiqtualuk Agguqti [Walker Arm], north side of river, west-northwest of Akuliqutaaluk [mountain]. Elev. 55 m. | 70°17′32″N, 71°52′24″W |
| 6.5 | 6 Aug 2021 | north side of river, 1.1 km west of head of Kangiqtualuk Agguqti [Walker Arm], west-northwest of Akuliqutaaluk [mountain]. Elev. 100 m. | 70°17′22″N, 71°53′33″W |

**Table 1.** Continued.

| Site | Date | Location | Coordinates |
|---|---|---|---|
| 6.6 | 6 Aug 2021 | 1.2 km west of head of Kangiqtualuk Agguqti [Walker Arm], north side of river valley, west-northwest of Akuliqutaaluk [mountain]. Elev. 105 m. | 70°17′33″N, 71°54′60″W |
| 7.1 | 7 Aug 2021 | 3.9 km west of head of Kangiqtualuk Agguqti [Walker Arm], northwest side of lake, west of Akuliqutaaluk [mountain]. Elev. 245 m. | 70°17′26″N, 71°58′13″W |
| 7.2 | 7 Aug 2021 | 4.9 km west of head of Kangiqtualuk Agguqti [Walker Arm], west side of lake, west of Akuliqutaaluk [mountain]. Elev. 215 m. | 70°17′3″N, 71°59′28″W |
| **Kangiqtualuk Agguqti – valley** | | | |
| 8.1 | 8 Aug 2021 | Delta of large river near head of Kangiqtualuk Agguqti [Walker Arm], northeast of Akuliqutaaluk [mountain]. Elev. 4 m. | 70°18′41″N, 71°45′5″W |
| 8.2 | 8 Aug 2021 | Side valley on east side of large river valley, 5 km south of river mouth near head of Kangiqtualuk Agguqti [Walker Arm], east of Akuliqutaaluk [mountain]. Elev. 30–35 m. | 70°16′17″N, 71°44′46″W |
| 8.3 | 8 Aug 2021 | East side of large river valley, 5.2 km south of river mouth near head of Kangiqtualuk Agguqti [Walker Arm], east of Akuliqutaaluk [mountain]. Elev. 60 m. | 70°16′11″N, 71°44′58″W |
| 8.4 | 8 Aug 2021 | East side of large river valley, 5.3 km south of river mouth near head of Kangiqtualuk Agguqti [Walker Arm], east of Akuliqutaaluk [mountain]. Elev. 70 m. | 70°16′8″N, 71°45′7″W |
| 8.5 | 8 Aug 2021 | East side of large river valley, 5.4 km south of river mouth near head of Kangiqtualuk Agguqti [Walker Arm], east of Akuliqutaaluk [mountain]. Elev. 90 m. | 70°16′3″N, 71°45′20″W |
| 8.6 | 8 Aug 2021 | West side of large river, 12 km southwest of river mouth near head of Kangiqtualuk Agguqti [Walker Arm], southwest of Akuliqutaaluk [mountain]. Elev. 80 m. | 70°13′23″N, 71°55′1″W |
| 8.7 | 8 Aug 2021 | West side of large river, 12.3 km southwest of river mouth near head of Kangiqtualuk Agguqti [Walker Arm], southwest of Akuliqutaaluk [mountain]. Elev. 110 m. | 70°13′21″N, 71°55′25″W |
| 8.8 | 8 Aug 2021 | West side of large river, 12.5 km southwest of river mouth near head of Kangiqtualuk Agguqti [Walker Arm], southwest of Akuliqutaaluk [mountain]. Elev. 100 m. | 70°13′14″N, 71°55′39″W |
| 8.9 | 8 Aug 2021 | West side of large river, 12.8 km southwest of river mouth near head of Kangiqtualuk Agguqti [Walker Arm], southwest of Akuliqutaaluk [mountain]. Elev. 90 m. | 70°13′10″N, 71°55′45″W |
| 8.10 | 8 Aug 2021 | West side of large river, 13.5 km southwest of river mouth near head of Kangiqtualuk Agguqti [Walker Arm], southwest of Akuliqutaaluk [mountain]. Elev. 90 m. | 70°12′52″N, 71°56′25″W |
| 21.1 | 21 Aug 2021 | Large river valley at head of Kangiqtualuk Agguqti [Walker Arm], on north side of river, 15.5 km southwest of river mouth. Elev. 55–60 m. | 70°12′38″N, 72°1′24″W |
| 21.2 | 21 Aug 2021 | Large river valley, 15.5 km southwest of river mouth near head of Kangiqtualuk Agguqti [Walker Arm], on north side of river. Elev. 55 m. | 70°12′39″N, 72°1′29″W |
| 21.3 | 21 Aug 2021 | Large river valley, 15.5 km southwest of river mouth near head of Kangiqtualuk Agguqti [Walker Arm], on north side of river. Elev. 60 m. | 70°12′37″N, 72°1′44″W |
| 21.4 | 21 Aug 2021 | Large river valley, 15.5 km southwest of river mouth near head of Kangiqtualuk Agguqti [Walker Arm], on north side of river. Elev. 75 m. | 70°12′43″N, 72°1′59″W |
| 21.5 | 21 Aug 2021 | Large river valley, 16.1 km southwest of river mouth near head of Kangiqtualuk Agguqti [Walker Arm], vicinity of cabin on north side of river. Elev. 60 m. | 70°12′35″N, 72°2′20″W |
| 21.6 | 21 Aug 2021 | Large river valley, 16.3 km southwest of river mouth near head of Kangiqtualuk Agguqti [Walker Arm], on north side of river. Elev. 60 m. | 70°12′30″N, 72°2′52″W |
| 21.7 | 21 Aug 2021 | Large river valley, 16.3 km southwest of river mouth near head of Kangiqtualuk Agguqti [Walker Arm], on north side of river. Elev. 60 m. | 70°12′27″N, 72°3′6″W |
| 21.8 | 21 Aug 2021 | Large river valley, 16.3 km southwest of river mouth near head of Kangiqtualuk Agguqti [Walker Arm], on north side of river. Elev. 60 m. | 70°12′27″N, 72°3′45″W |
| 21.9 | 21 Aug 2021 | Large river valley, 16.3 km southwest of river mouth near head of Kangiqtualuk Agguqti [Walker Arm], on north side of river. Elev. 65 m. | 70°12′28″N, 72°4′38″W |
| 21.10 | 21 Aug 2021 | Large river valley, 16.3 km southwest of river mouth near head of Kangiqtualuk Agguqti [Walker Arm], on north side of river. Elev. 65 m. | 70°12′26″N, 72°4′43″W |
| 21.11 | 21 Aug 2021 | Large river valley, 16.3 km southwest of river mouth near head of Kangiqtualuk Agguqti [Walker Arm], on north side of river. Elev. 65 m. | 70°12′27″N, 72°5′20″W |
| **Kangiqtualuk Uqquqti** | | | |
| 1.1 | 1 Aug 2021 | Sam Ford River valley, 2.3 km west of head of Kangiqtualuk Uqquqti [Sam Ford Fiord], small valley with pond and sedge meadows on northwest side of river. Elev. 90 m. | 70°1′50″N, 71°36′19″W |
| 1.2 | 1 Aug 2021 | Sam Ford River valley, 2.3 km west of head of Kangiqtualuk Uqquqti [Sam Ford Fiord], small valley with pond and sedge meadows on northwest side of river. Elev. 55 m. | 70°1′45″N, 71°36′3″W |
| 2.1 | 2 Aug 2021 | Sam Ford River valley, 3 km west of head of Kangiqtualuk Uqquqti [Sam Ford Fiord], near small lake on northwest side of valley. Elev. 125 m. | 70°1′54″N, 71°37′5″W |

**Table 1.** Continued.

| Site | Date | Location | Coordinates |
|---|---|---|---|
| 27.1 | 27 Jul 2021 | Sam Ford River valley, 3 km west of river mouth at head of Kangiqtualuk Uqquqti [Sam Ford Fiord], near small lake on northwest side of valley. Elev. 125 m. | 70°1′54″N, 71°37′5″W |
| 28.1 | 28 Jul 2021 | Sam Ford River valley, 3 km west of river mouth at head of Kangiqtualuk Uqquqti [Sam Ford Fiord], near small lake on northwest side of valley. Elev. 125 m. | 70°1′54″N, 71°37′5″W |
| 28.2 | 28 Jul 2021 | Sam Ford River valley, 3.3 km west of river mouth at head of Kangiqtualuk Uqquqti [Sam Ford Fiord], northwest side of valley. Elev. 135 m. | 70°1′56″N, 71°37′40″W |
| 28.3 | 28 Jul 2021 | Sam Ford River valley, 3.3 km west of river mouth at head of Kangiqtualuk Uqquqti [Sam Ford Fiord], northwest side of valley. Elev. 140 m. | 70°1′58″N, 71°37′44″W |
| 28.4 | 28 Jul 2021 | Sam Ford River valley, 3.5 km west of river mouth at head of Kangiqtualuk Uqquqti [Sam Ford Fiord], northwest side of valley. Elev. 150 m. | 70°1′56″N, 71°38′2″W |
| 28.5 | 28 Jul 2021 | Sam Ford River valley, 3.5 km west of river mouth at head of Kangiqtualuk Uqquqti [Sam Ford Fiord], northwest side of valley. Elev. 135 m. | 70°1′52″N, 71°38′7″W |
| 28.6 | 28 Jul 2021 | Sam Ford River valley, 3.5 km west of river mouth at head of Kangiqtualuk Uqquqti [Sam Ford Fiord], northwest side of valley. Elev. 140 m. | 70°1′50″N, 71°38′10″W |
| 28.7 | 28 Jul 2021 | Sam Ford River valley, 3.4 km west of river mouth at head of Kangiqtualuk Uqquqti [Sam Ford Fiord], northwest side of valley. Elev. 110 m. | 70°1′45″N, 71°37′51″W |
| 29.1 | 29 Jul 2021 | Sam Ford River valley, 2.8 km west of river mouth at head of Kangiqtualuk Uqquqti [Sam Ford Fiord], northwest side of river. Elev. 20 m. | 70°1′31″N, 71°36′44″W |
| 29.2 | 29 Jul 2021 | Sam Ford River valley, 2.8 km west of river mouth at head of Kangiqtualuk Uqquqti [Sam Ford Fiord], northwest side of river. Elev. 10 m. | 70°1′28″N, 71°36′39″W |
| 29.3 | 29 Jul 2021 | Sam Ford River valley, 3.0 km west of river mouth at head of Kangiqtualuk Uqquqti [Sam Ford Fiord], northwest side of river. Elev. 20 m. | 70°1′21″N, 71°36′52″W |
| 29.4 | 29 Jul 2021 | Sam Ford River valley, 3.3 km west of river mouth at head of Kangiqtualuk Uqquqti [Sam Ford Fiord], northwest side of river. Elev. 15 m. | 70°1′12″N, 71°37′12″W |
| 29.5 | 29 Jul 2021 | Sam Ford River valley, 3.7 km west of river mouth at head of Kangiqtualuk Uqquqti [Sam Ford Fiord], northwest side of river. Elev. 25 m. | 70°1′3″N, 71°37′38″W |
| 30.1 | 30 Jul 2021 | Sam Ford River valley, 1.5 km west of river mouth at head of Kangiqtualuk Uqquqti [Sam Ford Fiord], north side of river. Elev. 5 m. | 70°1′52″N, 71°34′53″W |
| 30.2 | 30 Jul 2021 | Sam Ford River valley, 1.5 km west of river mouth at head of Kangiqtualuk Uqquqti [Sam Ford Fiord], north side of river. Elev. 5 m. | 70°1′55″N, 71°34′46″W |
| 30.3 | 30 Jul 2021 | Sam Ford River valley, 1.1 km west of river mouth at head of Kangiqtualuk Uqquqti [Sam Ford Fiord], north side of river. Elev. 5 m. | 70°2′8″N, 71°34′7″W |
| 30.4 | 30 Jul 2021 | Sam Ford River valley, 0.9 km west of river mouth at head of Kangiqtualuk Uqquqti [Sam Ford Fiord], north side of river. Elev. 2 m. | 70°2′10″N, 71°33′36″W |
| 30.5 | 30 Jul 2021 | Sam Ford River delta at head of Kangiqtualuk Uqquqti [Sam Ford Fiord]. Elev. 0–1 m. | 70°1′56″N, 71°32′26″W |
| 30.6 | 30 Jul 2021 | Sam Ford River delta, 0.5 km west of head of Kangiqtualuk Uqquqti [Sam Ford Fiord]. Elev. 0–1 m. | 70°1′60″N, 71°33′2″W |
| 30.7 | 30 Jul 2021 | Sam Ford River delta, 0.6 km west of head of Kangiqtualuk Uqquqti [Sam Ford Fiord]. Elev. 1 m. | 70°2′0″N, 71°33′10″W |
| 30.8 | 30 Jul 2021 | Sam Ford River delta, 0.9 km west of head of Kangiqtualuk Uqquqti [Sam Ford Fiord], north side of river. Elev. 1 m. | 70°2′4″N, 71°33′36″W |
| 30.9 | 30 Jul 2021 | Sam Ford River valley, 1.6 km west of river mouth at head of Kangiqtualuk Uqquqti [Sam Ford Fiord], north side of river. Elev. 10 m. | 70°1′55″N, 71°34′55″W |
| 31.10 | 31 Jul 2021 | large waterfall on Sam Ford River, 9.2 km southwest of head of Kangiqtualuk Uqquqti [Sam Ford Fiord], on small island between waterfalls. Elev. 230 m. | 69°57′50″N, 71°42′17″W |
| **Kuugaaluk – barrens** | | | |
| A22.1 | 22 Aug 2021 | Lower slope of coastal hills, 7.5 km southwest of mouth of Kuugaaluk [river]. Elev. 140 m. | 70°40′41″N, 69°11′21″W |
| A22.2 | 22 Aug 2021 | South shore of lake, 5 km southwest of mouth of Kuugaaluk River. Elev. 40 m. | 70°40′47″N, 69°7′30″W |
| **Kuugaaluk – kames** | | | |
| 16.8 | 16 Aug 2021 | Kame and kettle complex on flat coastal plain, 4 km southeast of mouth of Kuugaaluk River. Elev. 70 m. | 70°40′30″N, 68°56′58″W |
| 19.5 | 19 Aug 2021 | Kame and kettle complex on flat coastal plain, 4 km southeast of mouth of Kuugaaluk River. Elev. 70 m. | 70°40′30″N, 68°56′58″W |
| **Kuugaaluk – mouth** | | | |
| 16.1 | 16 Aug 2021 | Coastal lowlands on Baffin Bay at mouth of Kuugaaluk River, on west side of river. Elev. 20 m. | 70°42′20″N, 69°0′41″W |
| 16.2 | 16 Aug 2021 | Coastal lowlands on Baffin Bay at mouth of Kuugaaluk River, on west side of river. Elev. 20 m. | 70°42′21″N, 69°0′48″W |
| 16.3 | 16 Aug 2021 | Coastal lowlands on Baffin Bay at mouth of Kuugaaluk River, on west side of river. Elev. 25 m. | 70°42′20″N, 69°0′53″W |
| 16.4 | 16 Aug 2021 | Coastal lowlands on Baffin Bay at mouth of Kuugaaluk River, on west side of river. Elev. 15 m. | 70°42′23″N, 69°0′49″W |

**Table 1.** Continued.

| Site | Date | Location | Coordinates |
|---|---|---|---|
| 16.5 | 16 Aug 2021 | Coastal lowlands on Baffin Bay at mouth of Kuugaaluk River, on west side of river. Elev. 1 m. | 70°42′18″N, 69°0′27″W |
| 16.6 | 16 Aug 2021 | Coastal lowlands on Baffin Bay at mouth of Kuugaaluk River, on west side of river. Elev. 5 m. | 70°42′18″N, 69°0′30.0″W |
| 16.7 | 16 Aug 2021 | Coastal lowlands on Baffin Bay at mouth of Kuugaaluk River, on west side of river. Elev. 4 m. | 70°42′16″N, 69°0′43″W |
| A22.3 | 22 Aug 2021 | Coastal lowlands on Baffin Bay at mouth of Kuugaaluk River, on west side of river. Elev. 0–2 m. | 70°42′18″N, 69°0′30″W |
| **Kuugaaluk – river** | | | |
| 19.1 | 19 Aug 2021 | Waterfall on Kuugaaluk River, 13.5 km southwest of river mouth, west side of river. Elev. 45 m. | 70°35′59″N, 69°11′14″W |
| 19.2 | 19 Aug 2021 | Waterfall on Kuugaaluk River, 13.5 km southwest of river mouth, west side of river. Elev. 65 m. | 70°35′57″N, 69°11′37″W |
| 19.3 | 19 Aug 2021 | Waterfall on Kuugaaluk River, 13.5 km southwest of river mouth, west side of river. Elev. 60 m. | 70°36′4″N, 69°11′24″W |
| 19.4 | 19 Aug 2021 | Sand hills on west bank of Kuugaaluk River, 7 km southwest of river mouth. Elev. 30–40 m. | 70°39′0″N, 69°6′30″W |
| **Marble Lake** | | | |
| 31.1 | 31 Jul 2021 | South shore of unnamed lake, 14.5 km west-northwest of head of Kangiqtualuk Uqquqti [Sam Ford Fiord]. Elev. 460 m. | 70°4′29″N, 71°54′16″W |
| 31.2 | 31 Jul 2021 | South shore of unnamed lake, 14.5 km west-northwest of head of Kangiqtualuk Uqquqti [Sam Ford Fiord]. Elev. 455 m. | 70°4′35″N, 71°54′24″W |
| 31.3 | 31 Jul 2021 | South shore of unnamed lake, 14.5 km west-northwest of head of Kangiqtualuk Uqquqti [Sam Ford Fiord]. Elev. 455 m. | 70°4′29″N, 71°53′51″W |
| **Niaqurnaaluk-Qassialuit** | | | |
| 18.1 | 18 Aug 2021 | Long sand beach between Niaqurnaaluk [Cape Eglinton] and Qassialuit [point], at east end of beach. Elev. 0–1 m. | 70°46′22″N, 69°21′50″W |
| 18.2 | 18 Aug 2021 | Rocky coast east of long sand beach between Niaqurnaaluk [Cape Eglinton] and Qassialuit [point]. Elev. 2–3 m. | 70°46′29″N, 69°21′32″W |
| **Ravenscraig Harbour** | | | |
| 18.6 | 18 Aug 2021 | Bay on east side of Arviqtujuq Kangiqtua [Eglinton Fiord], southwest of Ravenscraig Harbour. Elev. 4 m. | 70°41′21″N, 69°46′44″W |
| 18.7 | 18 Aug 2021 | Ravenscraig Harbour on east side of Arviqtujuq Kangiqtua [Eglinton Fiord]. Elev. 5 m. | 70°41′8″N, 69°41′10″W |
| **Refuge Harbour** | | | |
| 11.1 | 11 Aug 2021 | Remote Peninsula, large valley northeast of Refuge Harbour, 2.5 km northeast of head of bay, west of Aglu Peak. Elev. 180 m. | 70°52′59″N, 71°7′36″W |
| 11.2 | 11 Aug 2021 | Remote Peninsula, large valley northeast of Refuge Harbour, 2.3 km northeast of head of bay, west of Aglu Peak. Elev. 180 m. | 70°52′55″N, 71°7′44″W |
| 11.3 | 11 Aug 2021 | Remote Peninsula, large valley northeast of Refuge Harbour, 2.0 km northeast of head of bay, west of Aglu Peak. Elev. 170 m. | 70°52′48″N, 71°7′50″W |
| 11.4 | 11 Aug 2021 | Remote Peninsula, large valley northeast of Refuge Harbour, 2.2 km northeast of head of bay, west of Aglu Peak. Elev. 175 m. | 70°52′51″N, 71°7′37″W |
| 12.1 | 12 Aug 2021 | Remote Peninsula, large valley northeast of Refuge Harbour, 1.9 km northeast of head of bay, west of Aglu Peak. Elev. 195 m. | 70°52′38″N, 71°7′54″W |
| 12.2 | 12 Aug 2021 | Remote Peninsula, large valley northeast of Refuge Harbour, 1.0 km northeast of head of bay, west of Aglu Peak. Elev. 125 m. | 70°52′14″N, 71°8′53″W |
| 12.3 | 12 Aug 2021 | Remote Peninsula, large valley northeast of Refuge Harbour, 0.3 km northeast of head of bay, west of Aglu Peak. Elev. 40 m. | 70°52′4″N, 71°10′3″W |
| 12.4 | 12 Aug 2021 | Remote Peninsula, Refuge Harbour, northeast shore at head of bay, west of Aglu Peak. Elev. 3 m. | 70°51′57″N, 71°10′24″W |
| 12.5 | 12 Aug 2021 | Remote Peninsula, large valley northeast of Refuge Harbour, 0.3 km east of head of bay, west of Aglu Peak. Elev. 10-15 m. | 70°51′46″N, 71°10′13″W |
| 12.6 | 12 Aug 2021 | Remote Peninsula, large valley northeast of Refuge Harbour, 0.3 km east of head of bay, west of Aglu Peak. Elev. 10-15 m. | 70°51′49″N, 71°10′9″W |
| 12.7 | 12 Aug 2021 | Remote Peninsula, large valley northeast of Refuge Harbour, 0.3 km northeast of head of bay, west of Aglu Peak. Elev. 45 m. | 70°52′0″N, 71°9′55″W |
| 12.8 | 12 Aug 2021 | Remote Peninsula, large valley northeast of Refuge Harbour, 0.8 km northeast of head of bay, west of Aglu Peak. Elev. 90 m. | 70°52′14″N, 71°9′29″W |
| 14.1 | 14 Aug 2021 | Remote Peninsula, large valley northeast of Refuge Harbour, 2.2 km northeast of head of bay, west of Aglu Peak. Elev. 185 m. | 70°52′43″N, 71°7′27″W |
| 14.2 | 14 Aug 2021 | Remote Peninsula, large valley northeast of Refuge Harbour, 2.2 km northeast of head of bay, west of Aglu Peak. Elev. 195 m. | 70°52′40″N, 71°7′17″W |

**Table 1.** Continued.

| Site | Date | Location | Coordinates |
|---|---|---|---|
| 14.3 | 14 Aug 2021 | Remote Peninsula, large valley northeast of Refuge Harbour, 2.5 km northeast of head of bay, west of Aglu Peak. Elev. 200 m. | 70°52′36″N, 71°6′47″W |
| 14.4 | 14 Aug 2021 | Remote Peninsula, large valley northeast of Refuge Harbour, 2.6 km northeast of head of bay, west of Aglu Peak. Elev. 220 m. | 70°52′37″N, 71°6′30″W |
| **Stewart Valley** | | | |
| 15.1 | 15 Aug 2021 | Stewart Valley, midway along valley, on west side opposite glacier and moraine below Tiiturvik Peak and Pana Peak. Elev. 100–130 m. | 70°45′13″N, 71°23′46″W |
| **Tasialuk N** | | | |
| 26.1 | 26 Jul 2021 | Tasialuk [Ayr Lake], northeast end of lake, south of Kuugaaluk River. Elev. 70 m. | 70°30′20″N, 69°34′12″W |
| 26.2 | 26 Jul 2021 | Tasialuk [Ayr Lake], northeast end of lake, south of Kuugaaluk River. Elev. 70 m. | 70°30′24″N, 69°34′16″W |
| 26.3 | 26 Jul 2021 | Tasialuk [Ayr Lake], northeast end of lake, south of Kuugaaluk River. Elev. 80 m. | 70°30′28″N, 69°34′31″W |
| 26.4 | 26 Jul 2021 | Kuugaaluk River valley, 7 km east of northeast end of Tasialuk [Ayr Lake], south of river. Elev. 170 m. | 70°29′42″N, 69°22′37″W |
| **Tasialuk S** | | | |
| 21.12 | 21 Aug 2021 | Sand hills on east side of large valley at south end of Tasialuk [Ayr Lake], 13.6 km south of unnamed lake south of Tasialuk. Elev. 220–230 m. | 70°4′46″N, 70°46′49″W |
| 26.5 | 26 Jul 2021 | Large valley at south end of Tasialuk [Ayr Lake], 13.9 km south of unnamed lake south of Tasialuk, east side of valley. Elev. 120 m. | 70°4′50″N, 70°48′50″W |
| 26.6 | 26 Jul 2021 | Large valley at south end of Tasialuk [Ayr Lake], 6.1 km south of unnamed lake south of Tasialuk, west side of valley. Elev. 90 m. | 70°8′45″N, 70°44′2″W |
| **Tingijattut** | | | |
| 15.2 | 15 Aug 2021 | Valley at south end of Tingijattut [bay] on northwest corner of Kangiqtualuk Agguqti [fiord], west of Qulliqtaliujaq [point], 1.8 km from coast, at north end of lake. Elev. 130 m. | 70°35′6″N, 71°38′9″W |
| 15.3 | 15 Aug 2021 | valley at south end of Tingijattut [bay] on northwest corner of Kangiqtualuk Agguqti [fiord], west of Qulliqtaliujaq [point], 1.7 km from coast, near north end of lake. Elev. 140 m. | 70°35′8″N, 71°38′7″W |
| 15.4 | 15 Aug 2021 | valley at south end of Tingijattut [bay] on northwest corner of Kangiqtualuk Agguqti [fiord], west of Qulliqtaliujaq [point], 1.7 km from coast, near north end of lake. Elev. 140 m. | 70°35′9″N, 71°38′5″W |
| 15.5 | 15 Aug 2021 | valley at south end of Tingijattut [bay] on northwest corner of Kangiqtualuk Agguqti [fiord], west of Qulliqtaliujaq [point] 1.3 km from coast. Elev. 100 m. | 70°35′21″N, 71°37′41″W |
| 15.6 | 15 Aug 2021 | Valley at south end of Tingijattut [bay] on northwest corner of Kangiqtualuk Agguqti [fiord], west of Qulliqtaliujaq [point] 1.2 km from coast. Elev. 70 m. | 70°35′23″N, 71°37′29″W |
| 15.7 | 15 Aug 2021 | valley at south end of Tingijattut [bay] on northwest corner of Kangiqtualuk Agguqti [fiord], west of Qulliqtaliujaq [point], 1.0 km from coast. Elev. 60 m. | 70°35′26″N, 71°37′17″W |
| 15.8 | 15 Aug 2021 | valley at south end of Tingijattut [bay] on northwest corner of Kangiqtualuk Agguqti [fiord], west of Qulliqtaliujaq [point], 0.3 km from coast. Elev. 15 m. | 70°35′40″N, 71°36′15″W |
| 15.9 | 15 Aug 2021 | Coast on north side of river mouth at south end of Tingijattut [bay] on northwest corner of Kangiqtualuk Agguqti [fiord], west of Qulliqtaliujaq [point]. Elev. 2 m. | 70°35′40″N, 71°35′59″W |
| 15.10 | 15 Aug 2021 | Coast north of river mouth at south end of Tingijattut [bay] on northwest corner of Kangiqtualuk Agguqti [fiord], west of Qulliqtaliujaq [point]. Elev. 5 m. | 70°35′53″N, 71°36′2″W |

two points, Niaqurnaaluk [Cape Eglinton] and Qassialuit, and included the eastern end of a long sand beach (18.1) and adjacent rocky shoreline of outcrops and boulders (18.2) (Figure 2A, B). Several stops were made along the mouth of Arviqtujuq Kangiqtua, two in the vicinity of Ravenscraig Harbour (18.6, 18.7) on the southeast side, and two along the shore of the steeply sloped peninsula on the northwest side (Arviqtujuq Kangiqtua NW: 18.3, 18.4; Figure 2C).

Numerous localities were surveyed in the Fiord and Mountain zone, including a broad valley with coastal influence (Refuge Harbour), two long U-shaped valleys (Atagulisaktalik, Stewart Valley) and two small side valleys (Tingijattut, Clark Fiord), and, further inland, four valleys at the head of three fiords (Kangiqtualuk Uqquqti, Kangiqtualuk Agguqti, Gibbs Fiord) and a large valley at the head of Tasialuk (Tasialuk S). At Atagulisaktalik [Revoir Pass], we surveyed the eastern part of the valley, where our base camp was located, including the pass area (22.1–22.3, 23.1–23.13, 24.1–24.6, 25.1; Figure 4A, B). The Refuge Harbour locality (11.1–11.4, 12.1–12.8, 14.1–14.4) was located at the south end of a broad valley on Remote Peninsula; we surveyed the southern end of this valley, where our base camp was located near a small lake (Figure 4E, F).

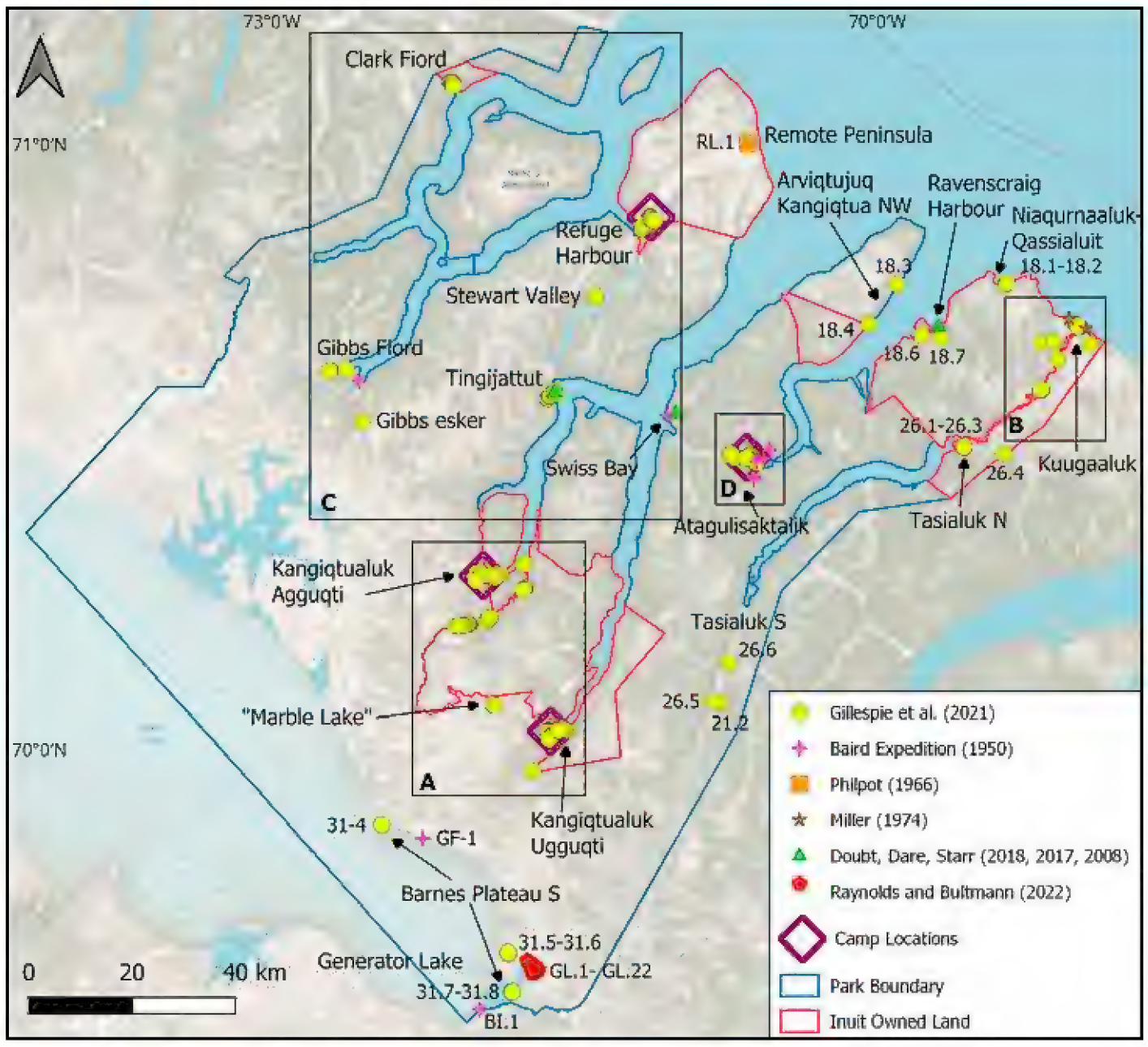


**Figure 8.** Map of Agguttinni Territorial Park showing camp locations (purple diamond), main collecting localities, and all collection sites. Collection sites are labelled by site number (see Tables 1, 2) and with symbols indicating collectors/ expedition. 1950 Baffin Expedition (pink cross), 1975 Miller (brown star), 1966 Philpot et al. (orange square), 2008 Starr, 2017 Doubt, 2018 Dare (green triangle), 2001 Gillespie et al. (yellow circle), and 2022 Raynolds and Bültmann collections (red hexagon). Park boundary (blue line), Inuit Owned Land (red line), See Figure 9 for collection site numbers within the four lettered rectangles.

A single stop was made in Stewart Valley, about halfway along, opposite a glacier and large moraine that divides the elongate lake on the valley floor into two parts (15.1; Figure 4C, D). Two helicopter stops were made in the valley at the north end of Tasialuk (Tasialuk N), one near the lakeshore at the head of a bay south of the outflow to Kuugaaluk (26.1–26.3), and one inland 7 km east (26.4). Three stops were made in the long narrow valley at the south end of the lake (Tasialuk S; Figure 6G) on two days almost four weeks apart, for 1–2 hours each, sampling an aeolian sand slope with rock outcrops (21.12) and stony polygon-patterned ground and meadows on the valley floor (26.5, 26.6; Figure 6H). Two small side valleys off large fiords were surveyed. One was midway along the west side of Clark Fiord (Clark Fiord; 20.1–20.8; Figure 5A, B). The second was a narrow, steep-sided valley at the south end of Tingijattut [bay] on the northwest corner of Kangiqtualuk Agguqti (Figure 4G, H), where we surveyed the 1.8 km long section from the outlet of a large lake to the coast, where numerous archeological sites are found (Tingijattut: 15.2–15.10).

Our base camp in the large valley at the head of Kangiqtualuk Uqquqti was located by a small lake in a broad basin-like side valley, 1 km across, on the north side of the valley about halfway along (Figure 5D, F). Numerous sites were explored on foot, from the delta to about 4 km up-valley (1.1, 1.2, 2.1, 27.1, 28.1–28.7, 29.1–29.5, 30.1–30.9, 31.10; Figure 5D–H). Two areas were extensively surveyed at the head of Kangiqtualuk Agguqti: the extreme end of the fiord west to a large lake where our camp was located (Kangiqtualuk Agguqti – camp: 3.1–3.6, 5.1–5.5, 6.1–6.6, 7.1, 7.2; Figure 6A) and the large river valley to the east; the two areas are separated by Akuliqutaaluk [mountain]. Four sections of the large valley were explored from the mouth to about 16 km inland (Kangiqtualuk Agguqti – valley: 8.1, 8.2–8.5, 8.6-8.10, 21.1–11; Figure 6B–D). Three sites were visited briefly in the Tay River valley at the head of Gibbs Fiord (Gibbs Fiord: 20.9, 20.10, 20.11; Figure 6E, F).

We were only able to explore a very small part of the Barnes Plateau due to poor weather conditions and limited helicopter availability. Three helicopter stops were made in the southern part of the park near the Barnes Ice Cap to survey representative sites. One site was surveyed at the edge of the Barnes Ice Cap (Barnes Plateau S – icecap edge: 31.4; Figure 7A, B). A second stop was made midway along the east shore of Generator Lake (Barnes Plateau S – Generator Lake: 31.8, 31.9; Figure 7C). The third site was an area of sand hills and bluffs and densely vegetated meadows along a river between the ice cap and Generator Lake, about 4 km east of the ice cap (Barnes Plateau S – meadow/hills; 31.5–31.7; Figure 7H).

Two helicopter stops were made on the Barnes Plateau near its eastern edge. One locality, south of the head of Gibbs Fiord and just east of the Erik River canyon, was visited to survey an esker (Gibbs esker: 20.9–20.11; Figure 7D). The second locality was adjacent to an unnamed lake west of the head of Kangiqtualuk Uqquqt, chosen for the presence of marble (mostly white dolomite marble, GSC Geology Map 1582A Clyde River), a potentially interesting calcareous substrate ("Marble Lake": 31.1–31.3; Figure 7F, G). It was

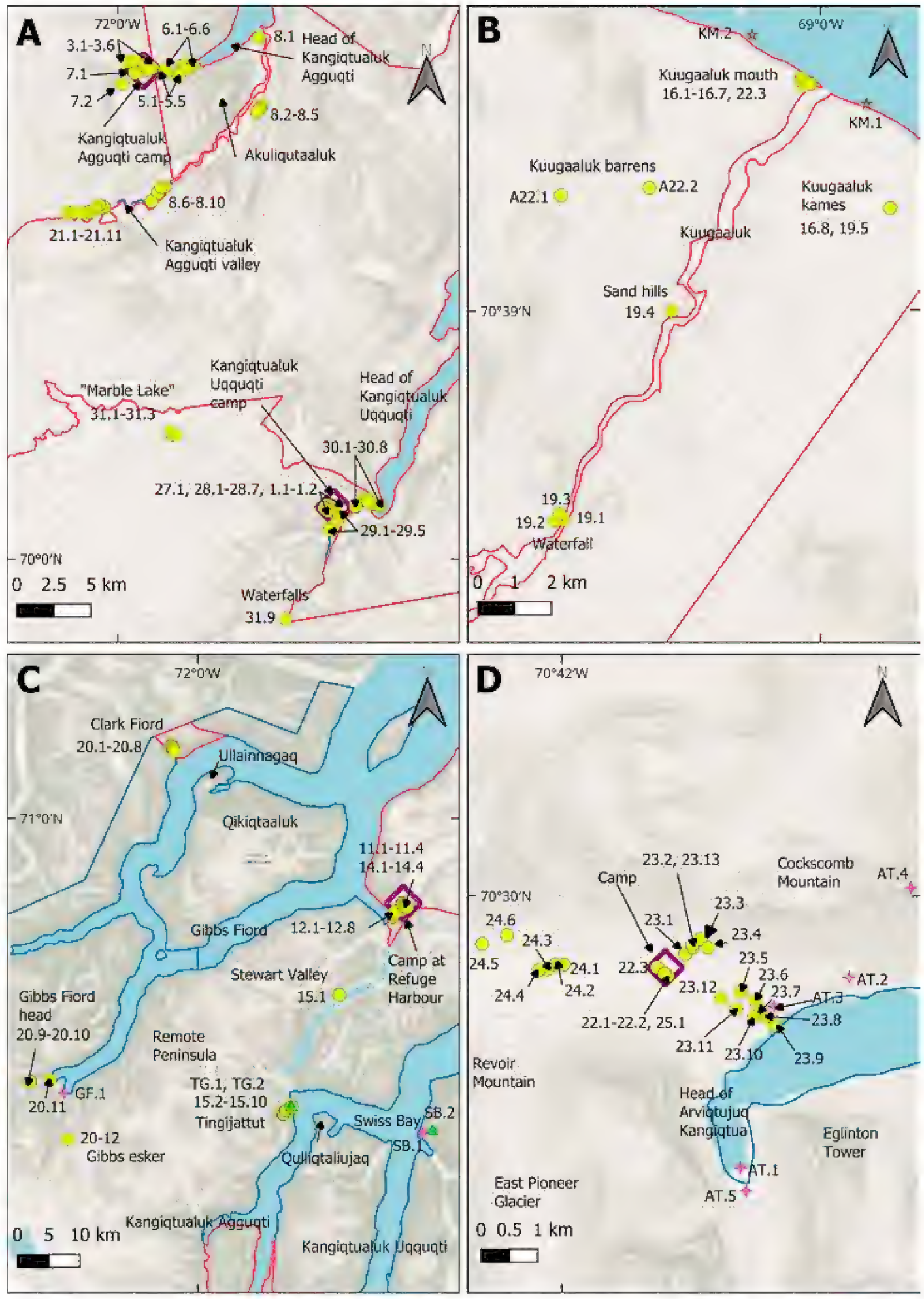


**Figure 9.** Map of Agguttinni Territorial Park botanical showing collecting localities and sites within the lettered insets shown in Figure 8. Collection sites labelled as in Figure 8.

also an example of a green meadow and adjacent vegetated slopes and outcrop ridges (Figure 7G).

We documented and made collections of all vascular plant species encountered within Agguttinni TP. Lichens and bryophytes were also collected, with a focus on conspicuous and interesting species; due to the lack of specialists on the field team, these collections were not comprehensive. Specimens were collected using a sampling method similar to that of Newmaster et al. (2005). They showed that surveying larger areas with a focus on sampling within diverse habitats and microhabitats (referred to as floristic habitat sampling) captures diversity more effectively than smaller representative plots. We attempted to collect all vascular plant species at each locality; however, due to time constraints this was not always possible. At some localities we collected only species that were uncommon in the park, not yet recorded for the zone, or otherwise interesting. We recorded the more common and easy to identify species with photographs or written observations.

We undertook comprehensive surveys of eight localities in 2021: Atagulisaktalik, Clark Fiord, Kangiqtualuk Agguqti – camp, Kangiqtualuk Agguqti – valley, Kangiqtualuk Uqquqti, Kuugaaluk – mouth, Refuge Harbour, and Tingijattut. We also undertook reasonably complete surveys (time limited) of Arviqtujuq Kangiqtua NW, Gibbs esker, Kugluktuk barrens, Kugluktuk river, Kugluktuk kames, Marble Lake, Niaqurnaaluk-Qassialuit, and Stewart Valley localities, Surveys of Gibbs Fiord, Ravenscraig Harbour, Tasialuk N, Tasialuk S were incomplete due to very limited time. Our surveys of the Barnes Plateau S localities were not complete, but

together and along with collections by other botanists give a good estimate of species diversity on the Barnes Plateau in the southernmost part of the park.

Vascular plants were collected following standard botanical techniques. Specimens were collected with a broad-bladed digging knife or pruners, pressed between sheets of newspaper, and dried in the sun in the field or with a portable electric heater in Clyde River. A small amount of leaf tissue from each collection was sampled and dried in silica gel for potential future DNA analyses. Bryophytes and lichens were collected by hand or using a broad-bladed knife. Specimens were placed in paper bags and air dried. For each collection, the precise locality, GPS coordinates (using the WGS84 geographical system), elevation, habitat, date collected, and, for lichens and bryophytes, substrate were recorded. Species and habitats were also documented by digital images. The primary set is deposited at the National Herbarium of Canada (CAN, CANL, CANM) at the CMN, and the second and third sets of vascular plant specimens with Nunavut Parks and Special Place, Iqaluit, and the Canadian High Arctic Research Station, Cambridge Bay, respectively; other duplicates will be distributed to various herbaria across Canada, including Université de Montréal (MT), University of British Colombia (UBC), and University of Calgary (UAC).

**Herbarium research.** To develop a comprehensive checklist of the vascular plants of Agguttinni TP and preliminary checklists of the bryophytes and lichens, we attempted to account for all collections made in the park. To locate specimens we searched herbaria, online collection databases, and literature. We also processed and accessioned several recent unmounted collection lots at the CMN.

We manually searched herbaria at the Canadian Museum of Nature (CAN), Agriculture and Agrifoods Canada (DAO), and the Université de Montréal (MT) (the latter two herbaria are only minimally digitized) for vascular plant specimens, CANM for bryophytes, and CANL for lichens. Several collection lots in the CMN herbarium backlog were processed specifically for this study, including O. Dare's 2017 collection of vascular plants, bryophytes, and lichens from Ravenscraig Harbour and Tingijattut, and J. Doubt's 2018 collection of bryophytes from Tingijattut. A recent gift to CMN of a 2022 collection lot of vascular plants, bryophytes, and lichen by M. Raynolds and H. Bültmann from near the Barnes Ice Cap in the southern part of the park was also processed for this study.

To locate additional specimens previously collected within Agguttinni TP, we searched the Global Biodiversity Information Facility (GBIF) website for all geo-referenced occurrence records within a coordinate bounding box that included the park (GBIF, 20 May 2020, https://doi.org/10.15468/dl.awjhb7), and subsequently for preserved specimens within that area, including both plants (GBIF.org, 30 November 2021a, https://doi.org/10.15468/dl.5rx9mr) and lichens (GBIF.org, 30 November 2021b, https://doi.org/10.15468/dl.6d4za5) for any newly added records. The downloaded data were then refined to include only plant and lichen specimens occurring within the park.

To locate occurrence records from specimens served online that were lacking coordinates, we searched GBIF, the Consortium of Lichen Herbaria (CLH), and the Consortium of Bryophyte Herbaria (CBH) portals for specimens with the following locality key terms, all features within the park (GBIF.org, 02 December 2021, https://doi.org/10.15468/dl.bkyhur; GBIF.org, 29 January 2023a, https://doi.org/10.15468/dl.j888bp; GBIF.org, 29 January 2023b, https://doi.org/10.15468/dl.k2af3r; https://lichenportal.org, accessed 29 January 2023; https://bryophyteportal.org/portal, accessed 29 January 2023): Arviqutujuq Kangiqtua, Ayr Lake, Barnes Ice Cap, Bieler Lake, Cape Adair, Clark Fiord, Cockscomb Mountain, Cockscomb River, Conn Glacier, Conn Lake, East Pioneer Glacier, Eglinton Fiord, Erik Point, Erik River, Esquimaux River, Gee Lake, Generator Lake, Gibbs Fiord, Kuugaaluk, Mount Revoir, Ottawa Glacier, Pilattuaq, Qikiqtaaluk Island, Ravenscraig Harbour, Refuge Harbour, Remote Lake, Remote Peninsula, Revoir Pass, Revoir River, Sam Ford Fiord, Scott inlet, Sikunga Glacier, Sillem Island, Sledge Pointers, Snowline Glacier, Snowline Peak, Stewart Valley, Swiss Bay, Tasialuk, Tay River, the Tail Feathers, Utinatuk Glacier, Walker Arm, and West Fortress Glacier. We also searched GBIF for plant (GBIF.org, 29 January 2023c, https://doi.org/10.15468/dl.92czcp; GBIF.org, 17 March 2023, https://doi.org/10.15468/dl.qx6ksj) and lichen (GBIF.org, 29 January 2023d, https://doi.org/10.15468/dl.av2hwm; GBIF.org, 17 March 2023, https://doi.org/10.15468/dl.n9ctdc) specimens recorded from Canada, without coordinates, and with collection dates during July and August 1950. We also searched for specimens collected by Mason Hale, Pierre Dansereau, Han Röthlisberger, and V.C. Wynne-Edwards, without coordinates, for samples not found using the previously described search parameters (GBIF.org, 29 January 2023e, https://doi.org/10.15468/dl.r6syru; GBIF.org, 29 January 2023f, https://doi.org/10.15468/dl.r6syru).

Lastly, we searched the GBIF occurrence data from the University of Colorado Museum of Natural History Herbarium Vascular Plant Collection (COLO) by exporting all their Canadian records (GBIF.org, 30 January 2023, https://doi.org/10.15468/dl.49avyj), keeping those from Nunavut and the Northwest Territories (all lacking specific locality data beyond the territory), and then manually sorting through the resulting specimen images for specimens collected in the park, with a specific focus on finding specimens collected by J.T. Philpot, P.A. Crompton, and J. Ryder at Remote Lake.

Our online searches resulted in only 18 additional specimens of vascular plants from the park. We examined and confirmed or re-identified specimen images from COLO, the herbaria at the University of Zurich (ZT) and Royal Botanic Garden Edinburgh (E). We recorded an additional 61 bryophyte and 136 lichen specimens, all from the 1950 Baffin Island Expedition (except for 4 bryophyte specimens). Bryophyte specimens were primarily from herbaria at the New York Botanic Garden (NY) and the Smithsonian Institution (US),

and lichens from the University of Wisconsin (WIS), where the main set of lichen specimens from the 1950 Expedition is housed. Although many of these specimens could not be confirmed, most were identified by experts (G.R. Brassard and W.C. Steere for bryophytes; M.E. Hale for lichens) or were duplicates of collections that we had confirmed. We retained these in our dataset and updated the taxonomy as necessary; specimens with dubious identifications that could not be verified were excluded.

**Specimen identification.** Vascular plant taxonomy and species identification is based on consideration of the relevant global taxonomic literature, including Elven et al. (2011), treatments in the Flora of North America north of Mexico (Flora of North America Editorial Committee 1993+) and Flore nordique du Québec et du Labrador (Payette 2013, 2015, 2018, 2023), and recent revisions and nomenclatural updates, including Barberá et al. (2019), Gilman and Testo (2015), Jørgensen et al. (2006), Morin (2020), Schönswetter et al. (2001), and Solstad (2009). English and French common names generally follow Brouillet et al. (2010+). Vascular plants were identified by L.J. Gillespie, G.A. Levin, and P.C. Sokoloff to the species or, where applicable, the infraspecific level. All previous collections cited were examined by us, and either re-identified or their identifications confirmed. Species distributions in North America outside the park were based on published literature, primarily Porsild and Cody (1980), Aiken et al. (2007), and Payette (2013, 2015, 2018, 2023), and on Global Biodiversity Information Facility (GBIF)-mediated herbarium collection data. We accepted records discovered on GBIF only when we could confirm a specimen determination based on an image.

The main references used for nomenclature and identification of bryophytes were Damsholt (2009, 2013), Faubert (2012, 2013, 2014), and treatments in the Flora of North America north of Mexico (Flora of North America Editorial Committee 1993+). English and French common names largely follow Faubert et al. (2014+). Bryophytes were identified by J. Doubt.

The main references used for nomenclature and identification of lichens were American Arctic Lichens (Thomson 1984, 1997), Lichens of North America (Brodo et al. 2001), Lichens of Great Britain and Ireland (Smith et al. 2009), British and other Pyrenocarpous Lichens (Orange 2013), Lichen Flora of the Greater Sonoran Desert Region (Nash et al. 2002, 2004, 2007), and publications by Brodo and Hawksworth (1977) and Esslinger (2021). Many lichens require extensive chemical analysis for identification. Lichen chemistry was assessed using spot tests with reagents, an ultraviolet light chamber, and thin-layer chromatography following Culberson and Kristinsson (1970) and Orange et al. (2001). Lichens were identified by R.T. McMullin and P.C. Sokoloff.

## RESULTS

**2021 collections.** We made a total of 1,007 collections in Agguttinni TP during our fieldwork in 2021, including 829 vascular plant, 155 lichen, 21 bryophyte, and 2 macroalgae collections (see Supplemental Data for complete collection data). We made collections from 165 sites grouped into 23 main localities (Table 1; see methods for descriptions of the localities).

The two macroalgae collections made are *Fucus vesiculosus* L. and *Saccharina latissima* (L.) C.E.Lane, C.Mayes, Druehl & G.W.Saunders (identified by A. Savoie). Both are common coastal species that are often washed up on beaches and rocky shorelines. A more comprehensive survey of seaweeds would require collecting underwater by diving. These algae collections are not further discussed here.

**Other Collections.** In addition to our 2021 collections, we recorded a total of 386 herbarium specimens representing 300 collections: 127 vascular plant specimens representing 119 collections, of which 24 were from the 1950 Expedition, 13 by Philpot et al. (1966), 2 by J. Starr (2008), 36 by O. Dare (2017), and 44 by M. Raynolds and/or H. Bültmann (1922); 105 bryophyte specimens representing 83 collections: 36 from the 1950 Expedition, 2 by Miller (1974), 13 by O. Dare (2017), 29 by J. Doubt (2018), and 3 by H. Bültmann (2022); and 175 lichen specimens representing 97 collections: 59 from the 1950 Expedition, 30 by O. Dare (2017), and 8 by H. Bültmann and M. Raynolds (2022). See Supplemental Data for complete specimen collection data.

These additional collections were made at ten main localities and 40 sites (Table 2), indicated on the maps in Figures 8 and 9. The 1950 collections had imprecise locality information without coordinates on

**Table 2.** Pre-2021 and 2022 collection localites in Agguttinni Territorial Park and collection sites at each locality, ordered alphabetically by locality and then site number. For each site, the site number, date, collectors, locality (including elevation, where known), and coordinates are provided.

| Site | Date | Collectors | Location | Coordinates | Coordinate source |
|---|---|---|---|---|---|
| **Atagulisaktalik** | | | | | |
| AT-1 | 22, 23, 25, 26, 28 Jul 1950 | Dansereau Röthlisberger Wynne-Edwards | Head of Eglinton Fiord | 70.457°N, 70.616°W | Secondary: general location of Camp M2 at head of Eglinton Fiord (map in Baird et al. 1950) |
| AT-2 | 25 Jul 1950 | Dansereau | Head of Eglinton Fiord. Talus à la base de Cockscomb Mt. | 70.487°N, 70.565°W | Secondary: southern slope of Mt. Cockscomb |

**Table 2.** Continued.

| Site | Date | Collectors | Location | Coordinates | Coordinate source |
|---|---|---|---|---|---|
| AT-3 | 4 Aug 1950 | Röthlisberger | Eglinton Fiord north bank | 70.483°N, 70.600°W | Secondary: north bank of tip of Eglinton Fiord |
| AT-4 | 21 Aug 1950 | Röthlisberger | Head of Eglinton Inlet. Gendarme of the Cockscomb | 70.501°N, 70.536°W | Secondary: rocky outcrop ("gendarme") of Cockscomb Mountain. |
| AT-5 | 22 Aug 1950 | Röthlisberger | Eglinton Fiord, south bank | 70.457°N, 70.613°W | Secondary, coordinates are for the south bank of the tip of Eglinton Fiord |
| **Barnes Plateau S – Gee Lake** | | | | | |
| GE-1 | 11 Aug 1950 | Dansereau | Gee Lake | 69.849°N, 72.253°W | Secondary: southern shore of Gee Lake |
| **Barnes Plateau S – Generator Lake** | | | | | |
| GL-1 | 3 Aug 2022 | Bültmann & Raynolds | Generator Lake, at south end of Barnes Ice Cap. Elev. 460 m. | 69.6090°N, 71.6800°W | Primary |
| GL-2 | 4 Aug 2022 | Bültmann & Raynolds | Generator Lake, at south end of Barnes Ice Cap. Elev. 450 m. | 69.9120°N, 71.6900°W | Primary |
| GL-3 | 5 Aug 2022 | Bültmann & Raynolds | Generator Lake, at south end of Barnes Ice Cap. Elev. 480 m. | 69.6056°N, 71.6971°W | Primary |
| GL-4 | 6 Aug 2022 | Bültmann & Raynolds | Generator Lake, at south end of Barnes Ice Cap. Elev. 500 m. | 69.6028°N, 71.7112°W | Primary |
| GL-5 | 7 Aug 2022 | Bültmann & Raynolds | Generator Lake, at south end of Barnes Ice Cap. Elev. 410 m. | 69.6168°N, 71.7218°W | Primary |
| GL-6 | 8 Aug 2022 | Bültmann & Raynolds | Generator Lake, at south end of Barnes Ice Cap. Elev. 460 m. | 69.6050°N, 71.7010°W | Primary |
| GL-7 | 15 Aug 2022 | Bültmann & Raynolds | Generator Lake, at south end of Barnes Ice Cap. Elev. 390 m. | 69.6251°N, 71.7364°W | Primary |
| GL-8 | 16 Aug 2022 | Bültmann & Raynolds | Generator Lake, at south end of Barnes Ice Cap. Elev. 460 m. | 69.6089°N, 71.7116°W | Primary |
| GL-9 | 16 Aug 2022 | Bültmann & Raynolds | Generator Lake, at south end of Barnes Ice Cap. Elev. 450 m. | 69.6100°N, 71.7000°W | Primary |
| GL-10 | 5 Aug 2022 | Raynolds & Bültmann | Generator Strip, GEN-02. Elev. 490 m. | 69.6056°N, 71.6972°W | Primary |
| GL-11 | 5 Aug 2022 | Raynolds & Bültmann | Generator Strip, GEN-04. Elev. 490 m. | 69.6061°N, 71.7066°W | Primary |
| GL-12 | 6 Aug 2022 | Raynolds & Bültmann | Generator Strip, GEN-05. Elev. 480 m. | 69.6083°N, 71.7114°W | Primary |
| GL-12 | 6 Aug 2022 | Raynolds & Bültmann | Generator Strip, GEN-05. Elev. 480 m. | 69.6083°N, 71.7114°W | Primary |
| GL-13 | 6 Aug 2022 | Raynolds & Bültmann | Generator Strip, GEN-06. Elev. 470 m. | 69.6084°N, 71.7119°W | Primary |
| GL-14 | 7 Aug 2022 | Raynolds & Bültmann | Generator Strip, GEN-09. Elev. 400 m. | 69.6252°N, 71.7374°W | Primary |
| GL-15 | 16 Aug 2022 | Raynolds & Bültmann | Generator Strip, GEN-10. Elev. 390 m. | 69.6251°N, 71.7364°W | Primary |
| GL-16 | 8 Aug 2022 | Bültmann & Raynolds | Generator Strip, GEN-11. Elev. 410 m. | 69.6219°N, 71.7198°W | Primary |
| GL-17 | 16 Aug 2022 | Raynolds & Bültmann | Generator Strip, GEN-12. Elev. 400 m. | 69.6193°N, 71.7231W | Primary |
| GL-18 | 10 Aug 2022 | Raynolds & Bültmann | Generator Strip, GEN-17. Elev. 460 m. | 69.6126°N, 71.7165°W | Primary |
| GL-19 | 16 Aug 2022 | Raynolds & Bültmann | Generator Strip, GEN-19. Elev. 440 m. | 69.6173°N, 71.7095°W | Primary |
| GL-20 | 4 Aug 2022 | Raynolds & Bültmann | Generator Strip, GEN-23. Elev. 465 m. | 69.6164°N, 71.6966°W | Primary |
| GL-21 | 16 Aug 2022 | Raynolds & Bültmann | Generator Strip, GEN-25. Elev. 475 m. | 69.6105°N, 71.6988°W | Primary |
| GL-22 | 16 Aug 2022 | Raynolds & Bültmann | Generator Strip, GEN-26. Elev. 465 m. | 69.6112°N, 71.7039°W | Primary |
| **Barnes Plateau S – ice cap edge** | | | | | |
| BI-1 | 28–31 Jul 1950 | Hale | Barnes Ice Cap, near SE Lobe | 69.555°N, 71.971°W | Secondary: general location of Barnes Expedition Camp A2, at southernmost point of Generator Lake (Baird 1950; Hale 1954) |
| **Gibbs Fiord** | | | | | |
| GF-1 | 24 Jul 1950 | Dansereau | Gibbs Fiord | 70.615°N, 72.568°W | Secondary: general location of Camp G3 at head of Gibbs Fiord (Baird et al. 1950) |
| **Kuugaaluk – mouth** | | | | | |
| KM-1 | 1974 | Miller | Cliffs in lat 70 43 N, 69 03 W. Elev. 20 m. | 70°43′N, 69°03′W | Primary |

**Table 2.** Continued.

| Site | Date | Collectors | Location | Coordinates | Coordinate source |
|---|---|---|---|---|---|
| KM-2 | 29 Aug 1974 | Miller | Cliffs in lat 70 42 N, 68 58 W. Elev. 40 m. | 70°42′N, 68°58′W | Primary |
| **Ravenscraig Harbour** | | | | | |
| RH-1 | 8 Aug 2017 | Dare | Ravenscraig Harbour on eastern shore of Arviqtujuq Kangiqtua. Elev. 0-100 m. | 70°42′10″N, 69°41′52″W | Primary |
| **Remote Lake** | | | | | |
| RL-1 | 10 Aug 1966 | Philpot et al. | Remote Lake, Remote Peninsula, Elev. 0-75 m. | 71.0008°N, 70.6433°W | Secondary: camp on eastern edge of Remote Lake (Loken et al. 1966). |
| **Swiss Bay** | | | | | |
| SB-1 | 19 Jul 1950 | Röthlisberger | Ritchie Fiord: M.1. | 70.5583°N, 71.0417°W | Secondary: Camp M1 (map in Baird et al. 1950). Ritchie Fiord is Kangiqtualuk Uqquqti. |
| SB-2 | 11 Aug 2008 | Starr | Sam Ford Fiord. Glacial valley on eastern side of Kigut Peak. Large river resulting from glacial run-off passes down the middle of the valley. Sparse vegetation on either side of river. Elev. 180 m. | 70°33′41″N, 70°59′57″W | Primary |
| **Tingijattut** | | | | | |
| TG-1 | 3 Aug 2018 | Doubt | Kangiqtualuk Uqquqti (formerly Sam Ford Fiord). East-facing slope near outer shoreline of right-angle bend in Walker Arm. Elev. 180 m. | 70°35′46″N, 71°36′10″W | Primary |
| TG-2 | 10 Aug 2017 | Dare et al. | Remote Peninsula, Tingijattut (bay), at western arm of Kangiqtualuk Uqquqti (formerly Sam Ford Fiord). Elev. 0-50 m. | 70°35′41″N, 71°35′59″W | Primary |

the labels; notes on how these were georeferenced are in Table 2. Most localities were revisited by us in 2021, including Atagulisaktalik (east end), Gibbs Fiord, Ravenscraig Harbour, Tingijattut, and Kuugaaluk. Various localities on Barnes Plateau (including Generator Lake, Barnes Ice Cap edge, Gee Lake) were in the general vicinity of our Barnes Plateau S localities. Collections from the head of Eglinton Fiord (at the east end of Atagulisaktalik) are included in our Atagulisaktalik locality for purposes of counts and collections cited. Gibbs Fiord site GF1 (likely located in the Erik River valley at the head of Gibbs Fiord) collections were included in our Gibbs Fiord locality. Two main localities were not revisited in 2021: Swiss Bay, on the west side of Atagulisaktalik, and Remote Lake on Remote Peninsula.

**Vascular plants.** Here we report a total number of 144 vascular plant species and infraspecific taxa (141 species, three with two subspecies each) for Agguttinni TP (Table 3) based on 948 collections. These taxa belong to 65 genera and 25 families (Table 3). We recorded one lycopod species, two horsetail species, three fern species, and 135 flowering plant species (three with two subspecies each); no gymnosperms were present. The most species diverse flowering plant families are Poaceae (22 spp., one with 2 subspp.), Cyperaceae (22 spp.), Caryophyllaceae (15 spp.), Brassicaceae (12 spp.) and Saxifragaceae (10 spp., one with 2 subspp.). The largest genera are *Carex* (sedges, 16 spp.), *Draba* L. (8 spp.), *Potentilla* L. and *Saxifraga* L. (7 species, one with 2 subspp.), and *Eriophorum* L. (6 spp.). Most genera—40 out of 65—include only a single species. Two interspecific hybrids, *Salix arctica* × *S. arctophila* Cockerell ex A.Heller and *Tofieldia coccinea* Richardson × *T. pusilla* (Michx.) Pers., are not included in these totals but are listed in Table 3 and mentioned under their respective parental species in the checklist.

Our 2021 vascular plant collections comprise 137 species, three with two subspecies each (Table 3). Prior to our study only 45 species of vascular plants had been collected from the area now within Agguttinni TP (Table 3). In 2021, we recollected all of these species except for *Erigeron eriocephalus* J.Vahl., previously collected twice, on August 11 and 21, 1950 from Gee Lake on the Barnes Plateau and Atagulisaktalik. In 2022 M. Raynolds and H. Bültmann collected three additional species, *Deschampsia sukatschewii* (Popl.) Roshev, *Draba subcapitata* Simmons, and *Epilobium arcticum* Sam., in the vicinity of Generator Lake on the Barnes Plateau.

Vascular plant species present at each locality and the total species diversity of each locality and zone are provided in Table 4. Localities that were comprehensively or reasonably completely surveyed in 2021 or by M. Raynolds and H. Bültmann in 2022 (Generator Lake) are indicated. Among the three zones, the fiord and mountain zone had the highest species diversity (132 species and infraspecific taxa), followed by the coastal zone (78) and the Barnes Plateau (58). Among the localities that were extensively surveyed, Kangiqtualuk Agguqti (combined camp and valley) had the highest species diversity (108), followed by

Table 3. Vascular plants of Agguttinni Territorial Park. A summary of collectors and year collected is provided for each species and infraspecific taxon.

| **Species** | **2021** (Gillespie et al.) | **1950** (Dansereau, Röthlisberger, Wynne-Edwards | **1966** (Philpot et al.) | **2008** (Starr) or **2017** (Dare) | **2022** (Raynolds & Bültmann) |
|---|---|---|---|---|---|
| **LYCOPODS** | | | | | |
| **Lycopodiaceae** | | | | | |
| *Huperzia arctica* (Grossh. ex Tolm.) Sipliv. | X | | | | X |
| **Horsetails** | | | | | |
| **Equisetaceae** | | | | | |
| *Equisetum arvense* subsp. *alpestre* (Wahlenb.) Schönsw. & Elven | X | | | | X |
| *Equisetum variegatum* Schleich. subsp. *variegatum* | X | | | | |
| **Ferns** | | | | | |
| **Cystopteridaceae** | | | | | |
| *Cystopteris fragilis* (L.) Bernh. | X | | | | |
| **Dryopteridaceae** | | | | | |
| *Dryopteris fragrans* (L.) Schott | X | | | | |
| **Woodsiaceae** | | | | | |
| *Woodsia alpina* (Bolton) Gray | X | | | | |
| **FLOWERING PLANTS** | | | | | |
| **Monocots** | | | | | |
| **Cyperaceae** | | | | | |
| *Carex aquatilis* Wahlenb. subsp. *stans* (Drejer) Hultén | X | | | | X |
| *Carex atrofusca* Schkuhr | X | | | | |
| *Carex bigelowii* Torr. ex Schwein. subsp. *bigelowii* | X | X | | X | |
| *Carex capillaris* L. subsp. *fuscidula* (V.I.Krecz. ex T.V.Egorova) Á.Löve & D.Löve | X | | | | |
| *Carex fuliginosa* Schkuhr subsp. *misandra* (R.Br.) Nyman | X | X | | X | X |
| *Carex holostoma* Drejer | X | | | | |
| *Carex marina* Dewey | X | | | | |
| *Carex maritima* Gunnerus | X | | | | |
| *Carex membranacea* Hook. | X | X | | | |
| *Carex myosuroides* Vill. | X | X | | | |
| *Carex nardina* Fr. | X | X | | X | |
| *Carex rupestris* All. | X | | | | |
| *Carex scirpoidea* Michx. subsp. *scirpoidea* | X | | | | |
| *Carex simpliciuscula* Wahlenb. subsp. *subholarctica* (T. V. Egorova) Saarela | X | | | | |
| *Carex supina* Willd. ex Wahlenb. subsp. *spaniocarpa* (Steud.) Hultén | X | | | | |
| *Carex ursina* Dewey | X | | | | |
| *Eriophorum angustifolium* Honck. | X | | | | |
| *Eriophorum brachyantherum* Trautv. & C.A.Mey. | X | | | | |
| *Eriophorum callitrix* Cham. | X | | | | |
| *Eriophorum russeolum* Fr. subsp. *albidum* Väre | X | | | | |
| *Eriophorum scheuchzeri* Hoppe subsp. *arcticum* M.S.Novos. | X | | | | |
| *Eriophorum triste* (Th.Fr.) Hadač & Á.Löve | X | | | | X |
| **Juncaceae** | | | | | |
| *Juncus biglumis* L. | X | | | | X |
| *Juncus leucochlamys* V.J.Zinger ex V.I.Krecz. | X | | | | |
| *Juncus triglumis* L. subsp. *albescens* (Lange) Hultén | X | | | | |
| *Luzula confusa* Lindeb. | X | | X | X | X |
| *Luzula nivalis* (Laest.) Spreng. | X | | X | | X |
| **Poaceae** | | | | | |
| *Alopecurus borealis* Trin. | X | | X | | X |
| *Anthoxanthum monticola* (Bigelow) Veldkamp subsp. *alpinum* (Sw. ex Willd.) Soreng | X | | | X | |
| *Arctagrostis latifolia* (R.Br.) Griseb. subsp. *latifolia* | X | X | | X | |
| *Calamagrostis purpurascens* R.Br. | X | | | | |
| *Deschampsia cespitosa* (L.) P.Beauv. subsp. *septentrionalis* Chiapella | X | | X | | |
| *Deschampsia sukatschewii* (Popl.) Roshev. | | | | | X |
| *Dupontia fisheri* R.Br. | X | | | | X |
| *Festuca baffinensis* Polunin | X | | | | |
| *Festuca brachyphylla* Schult. & Schult.f. subsp. *brachyphylla* | X | | | X | X |
| *Festuca hyperborea* Holmen ex Fred. | X | | | X | |
| *Koeleria spicata* (L.) Barberá, Quintanar, Soreng & P.M.Peterson | X | X | | | |

**Table 3.** Continued.

| Species | **2021** (Gillespie et al.) | **1950** (Dansereau, Röthlisberger, Wynne-Edwards | **1966** (Philpot et al.) | **2008** (Starr) or **2017** (Dare) | **2022** (Raynolds & Bültmann) |
|---|---|---|---|---|---|
| *Leymus mollis* (Trin.) Pilg. subsp. *villosissimus* (Scribn.) Á.Löve & D.Löve | X | | | | |
| *Phippsia algida* (Sol.) R.Br. | X | | | | X |
| *Pleuropogon sabinei* R.Br. | X | | | | X |
| *Poa abbreviata* R.Br. | X | | | | |
| *Poa arctica* R.Br. subsp. *arctica* | X | | | | X |
| *Poa arctica* subsp. *caespitans* Simmons ex Nannf. | X | | | | |
| *Poa glauca* Vahl subsp. *glauca* | X | | | | X |
| *Poa hartzii* Gand. | X | | | | |
| *Puccinellia angustata* (R.Br.) E.L.Rand & Redfield | X | | X | | |
| *Puccinellia bruggemannii* T.J.Sørensen | X | | | | |
| *Puccinellia phryganodes* (Trin.) Scribn. & Merr. subsp. *neoarctica* Á.Löve & D.Löve) Elven | X | | | | |
| *Puccinellia tenella* (Lange) Holmb. subsp. *langeana* (Berlin) Tzvelev | X | X | | | |
| **Tofieldiaceae** | | | | | |
| *Tofieldia coccinea* Richardson | X | | | | |
| *Tofieldia pusilla* (Michx.) Pers. | X | | | | |
| **Eudicots** | | | | | |
| **Asteraceae** | | | | | |
| *Antennaria friesiana* (Trautv.) E.Ekman. subsp. *friesiana* | X | | | | |
| *Askellia pygmaea* (Ledeb.) Sennikov | X | X | | | |
| *Erigeron eriocephalus* J.Vahl. | | X | | | |
| *Hulteniella integrifolia* (Richardson) Tzvelev | X | | | | |
| *Taraxacum ceratophorum* (Ledeb.) DC. | X | | X | X | |
| *Taraxacum holmenianum* Sahlin | X | | | | |
| *Taraxacum phymatocarpum* J.Vahl | X | | X | | |
| *Tripleurospermum maritimum* (L.) W.D.J.Koch subsp. *phaeocephalum* (Rupr.) Hämet-Ahti | X | | | | |
| **Boraginaceae** | | | | | |
| *Mertensia maritima* (L.) Gray subsp. *tenella* (Fr.) Elven & Skarpaas | X | | | | |
| **Brassicaceae** | | | | | |
| *Arabidopsis arenicola* (Richardson ex Hook.) Al-Shehbaz, Elven, D.F.Murray & S.I.Warwick | X | | | | |
| *Braya glabella* Richardson subsp. *purpurascens* (R.Br.) Cody | X | | | | |
| *Cardamine bellidifolia* L. | X | | | | X |
| *Cochlearia groenlandica* L. | X | X | | | |
| *Draba arctica* J.Vahl | X | | | | |
| *Draba cinerea* Adams | X | | | | |
| *Draba corymbosa* R.Br. ex DC. | X | | | | |
| *Draba fladnizensis* Wulfen | X | X | | | |
| *Draba lactea* Adams | X | X | X | X | X |
| *Draba micropetala* Hook. | X | | | | |
| *Draba nivalis* Lilj. | X | X | | | X |
| *Draba subcapitata* Simmons | | | | | X |
| *Eutrema edwardsii* R.Br. | X | | X | | |
| *Physaria arctica* (Wormsk. ex Hornem.) O'Kane & Al-Shehbaz | X | | | | |
| **Campanulaceae** | | | | | |
| *Melanocalyx uniflora* (L.) Morin | X | | X | | |
| **Caryophyllaceae** | | | | | |
| *Arenaria humifusa* Wahlenb. | X | | | | |
| *Cerastium alpinum* L. subsp. *alpinum* | X | | | X | |
| *Cerastium arcticum* Lange | X | | | X | X |
| *Cherleria biflora* (L.) A.J.Moore & Dillenb. | X | | | | |
| *Honckenya peploides* (L.) Ehrh. subsp. *diffusa* (Hornem.) Hultén ex V.V.Petrovsky | X | | | | |
| *Sabulina rubella* (Wahlenb.) Dillenb. & Kadereit | X | | | | X |
| *Sabulina stricta* (Sw.) Rchb. | X | | | | |
| *Sagina caespitosa* Lange | X | | | | |
| *Sagina nivalis* (Lindblom) Fr. | X | | | | X |
| *Silene acaulis* (L.) Jacq. | X | | | X | |

**Table 3.** Continued.

| Species | 2021 (Gillespie et al.) | 1950 (Dansereau, Röthlisberger, Wynne-Edwards | 1966 (Philpot et al.) | 2008 (Starr) or 2017 (Dare) | 2022 (Raynolds & Bültmann) |
|---|---|---|---|---|---|
| *Silene involucrata* (Cham. & Schltdl.) Bocquet subsp. *involucrata* | X | | | X | |
| *Silene sorensenis* (B.Boivin) Bocquet | X | | | | |
| *Silene uralensis* (Rupr.) Bocquet subsp. *arctica* (Fr.) Bocquet | X | | | | X |
| *Stellaria humifusa* Rottb. | X | | | | |
| *Stellaria longipes* Goldie | X | | | X | X |
| Diapensiaceae | | | | | |
| *Diapensia lapponica* L. | X | | | | |
| **Ericaceae** | | | | | |
| *Cassiope tetragona* (L.) D.Don subsp. *tetragona* | X | | | X | X |
| *Empetrum nigrum* L. | X | | | X | |
| *Pyrola grandiflora* Radius subsp. *grandiflora* | X | X | X | X | |
| *Rhododendron lapponicum* (L.) Wahlenb. | X | | | | |
| *Rhododendron tomentosum* Harmaja subsp. *decumbens* (Aiton) Elven & D.F.Murray | X | | | | |
| *Vaccinium uliginosum* L. | X | | | X | |
| *Vaccinium vitis-idaea* L. subsp. *minus* (Lodd., G.Lodd. & W.Lodd.) Hultén | X | | | | |
| **Onagraceae** | | | | | |
| *Chamaenerion latifolium* (L.) Sweet | X | | | | X |
| *Epilobium arcticum* Sam. | | | | | X |
| **Orobanchaceae** | | | | | |
| *Pedicularis flammea* L. | X | | | | |
| *Pedicularis hirsuta* L. | X | | | | X |
| *Pedicularis lanata* Willd. ex Cham. & Schltdl. | X | | | | |
| **Papaveraceae** | | | | | |
| *Papaver labradoricum* (Fedde) Solstad & Elven | X | | | | |
| *Papaver lapponicum* (Tolm.) Nordh. | X | | | | X |
| **Plumbaginaceae** | | | | | |
| *Armeria maritima* (Mill.) Willd. subsp. *sibirica* (Turcz. ex Boiss.) Nyman | X | | | | |
| **Polygonaceae** | | | | | |
| *Bistorta vivipara* (L.) Delarbre | X | | | X | |
| *Koenigia islandica* L. | X | | | | |
| *Oxyria digyna* (L.) Hill | X | | | X | X |
| **Ranunculaceae** | | | | | |
| *Ranunculus arcticus* Richardson | X | | | | |
| *Ranunculus hyperboreus* Rottb. subsp. *hyperboreus* | X | | | | X |
| *Ranunculus nivalis* L. | X | | | | X |
| *Ranunculus pygmaeus* Wahlenb. | X | | | | |
| **Rosaceae** | | | | | |
| *Dryas integrifolia* Vahl subsp. *integrifolia* | X | | | X | |
| *Potentilla arenosa* (Turcz.) Juz. subsp. *arenosa* | X | | | | |
| *Potentilla arenosa* subsp. *chamissonis* (Hultén) Elven & D.F.Murray | X | | | | |
| *Potentilla hyparctica* Malte subsp. *hyparctica* | X | X | | X | X |
| *Potentilla nivea* L. | X | | | | |
| *Potentilla pulchella* R.Br. | X | | | | |
| *Potentilla subgorodkovii* Jurtzev | X | | | | |
| *Potentilla subvahliana* Jurtzev | X | X | | | |
| *Potentilla vahliana* Lehm. | X | X | | | |
| **Salicaceae** | | | | | |
| *Salix arctica* Pall. | X | | | X | X |
| *Salix herbacea* L. | X | | | X | X |
| *Salix reticulata* L. | X | | X | X | |
| *Salix richardsonii* Hooker | X | | | | X |
| **Saxifragaceae** | | | | | |
| *Micranthes foliolosa* (R.Br.) Gornall | X | | | | X |
| *Micranthes nivalis* (L.) Small | X | | | | X |

**Table 3.** Continued.

| Species | **2021** (Gillespie et al.) | **1950** (Dansereau, Röthlisberger, Wynne-Edwards | **1966** (Philpot et al.) | **2008** (Starr) or **2017** (Dare) | **2022** (Raynolds & Bültmann) |
|---|---|---|---|---|---|
| *Micranthes tenuis* Small | X | | | | |
| *Saxifraga aizoides* L. | X | | | | |
| *Saxifraga cernua* L. | X | | | | X |
| *Saxifraga cespitosa* L. subsp. *cespitosa* | X | | | | |
| *Saxifraga hyperborea* R. Br. | X | | | | X |
| *Saxifraga oppositifolia* L. subsp. *oppositifolia* | X | | | | X |
| *Saxifraga rivularis* L. subsp. *arctolitoralis* (Jurtzev & V.V.Petrovsky) M.H.Jørg. & Elven | X | | | | |
| *Saxifraga rivularis* subsp. *rivularis* | X | | | | |
| *Saxifraga tricuspidata* Rottb. | X | | | X | |
| **Totals**: 144 | 140 | 18 | 12 | 27 | 42 |

**Table 4.** Vascular plant species diversity by zone (Coastal Lowlands, Fiord and Mountain, Barnes Plateau) and locality (see Table 2). Species ordered alphabetically. V = vouchered 2021 collection, v = pre-2021 or 2022 collection, p = photograph voucher, o = observation, ? = species present but subspecies uncertain (or species uncertain in the case of *Eriophorum angustifolium* and *E. triste* presence), X = presence in a zone or group of localities, * localities not extensively surveyed in 2021, ** localities based on previous collections only, not visited in 2021, and not surveyed extensively. Subtotals are given for the four Kuugaaluk localities, the two Kangiqtualuk Agguqti localities, and the three Barnes Plateau S localities (Generator Lake, meadow/hills, and ice cap edge). Hybrid taxa are not included in the totals.

| | **Coastal Lowlands** | | | | | | | | | | **Fiord and Mountain** | | | | | | | | | | | | | | **Barnes Plateau** | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Species** | **Kuugaaluk mouth** | **Kuugaaluk river** | **Kuugaaluk barrens** | **Kuugaaluk kames** | **Kuugaaluk subtotal** | **Niaqurnaaluk-Qassialuit** | **Ravenscraig Harbour*** | **Arviqtujuq Kangiqtua NW** | **Remote Peninsula**** | **Coastal Lowlands total** | **Atagulisaktalik** | **Refuge Harbour** | **Stewart Valley*** | **Tasialuk N*** | **Tasialuk S*** | **Tingijattut** | **Clark Fiord** | **Kangiqtualuk Uqquqti** | **Kangiqtualuk Agguqti camp** | **Kangiqtualuk Agguqti valley** | **Kangiqtualuk Agguqti subtotal** | **Gibbs Fiord*** | **Swiss Bay**** | **Fiord & Mountain total** | **Gibbs esker** | **"Marble Lake"** | **Barnes S Generator Lake** | **Barnes S meadow/hills** | **Barnes S Ice Cap edge** | **Barnes Plateau S subtotal** | **Barnes Plateau total** |
| *Alopecurus borealis* | V | V | | | X | | | | v | X | | | | | | | | | | | | | | | | | v | V | | X | X |
| *Antennaria friesiana* subsp. *friesiana* | | V | | | X | | | | | X | V | | V | V | V | | V | V | V | V | X | | | X | V | V | | | | | X |
| *Anthoxanthum monticola* subsp. *alpinum* | V | o | o | o | X | o | o | p | | X | V | V | V | | | V | V | V | V | V | X | p | | X | p | V | | | | | X |
| *Arabidopsis arenicola* | | | | | | | | | | | | | | | V | | | | | | | | | X | | | | | | | |
| *Arctagrostis latifolia* subsp. *latifolia* | V | V | | | X | | | p | | X | V | V | V | | | V | V | V | V | V | X | | | X | | o | | | | | X |
| *Arenaria humifusa* | | | | | | | | | | | | | | | | | | V | | V | X | | | X | | | | | | | |
| *Armeria maritima* subsp. *sibirica* | V | o | | | X | | | | | X | V | | | V | V | p | V | V | V | V | X | V | | X | | | | | | | |
| *Askellia pygmaea* | | | | | | | | | | | v | | | | | | | V | | | | | v | X | | | | | | | |
| *Bistorta vivipara* | V | | | | X | | | p | | X | V | V | V | p | V | V | V | V | V | V | X | V | | X | | | | | | | |
| *Braya glabella* subsp. *purpurascens* | | | | | | | | | | | | | | | | | | V | | V | X | | | X | | | | | | | |
| *Calamagrostis purpurascens* | | | | | | | | | | | | | | | | | | | | V | X | | | X | | | | | | | |
| *Cardamine bellidifolia* | | V | o | | X | | | o | | X | V | V | | | | V | V | V | V | | X | | | X | | | v | | | X | X |
| *Carex aquatilis* subsp. *stans* | | | | | | | | | | | V | V | | o | V | | V | V | V | V | X | | | X | | | v | | | X | X |
| *Carex atrofusca* | | | | | | | | | | | | | | | V | V | | V | V | V | X | | | X | | | | | | | |
| *Carex bigelowii* subsp. *bigelowii* | V | V | o | | X | | o | o | | X | V | V | V | V | V | V | V | V | V | V | X | | | X | | | | | | | |
| *Carex capillaris* subsp. *fuscidula* | | | | | | | | | | | V | | V | | V | V | | V | V | V | X | V | | X | | | | | | | |
| *Carex fuliginosa* subsp. *misandra* | | | | | | V | | | | X | V | V | V | | | V | V | V | V | V | X | | v | X | | | v | | | X | X |

**Table 4.** Continued.

| | Coastal Lowlands | | | | | | | | | | Fiord and Mountain | | | | | | | | | | | | | | Barnes Plateau | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Species** | **Kuugaaluk mouth** | **Kuugaaluk river** | **Kuugaaluk barrens** | **Kuugaaluk kames** | **Kuugaaluk subtotal** | **Niaqurnaaluk-Qassialuit** | **Ravenscraig Harbour*** | **Arviqtujuq Kangiqtua NW** | **Remote Peninsula**** | **Coastal Lowlands total** | **Atagulisaktalik** | **Refuge Harbour** | **Stewart Valley*** | **Tasialuk N*** | **Tasialuk S*** | **Tingijattut** | **Clark Fiord** | **Kangiqtualuk Uqquqti** | **Kangiqtualuk Agguqti camp** | **Kangiqtualuk Agguqti valley** | **Kangiqtualuk Agguqti subtotal** | **Gibbs Fiord*** | **Swiss Bay**** | **Fiord & Mountain total** | **Gibbs esker** | **"Marble Lake"** | **Barnes S Generator Lake** | **Barnes S meadow/hills** | **Barnes S Ice Cap edge** | **Barnes Plateau S subtotal** | **Barnes Plateau total** |
| *Carex holostoma* | | | | | | | | | | | | | | | | | | V | V | V | X | | | X | | | | | | | |
| *Carex marina* | | | | | | | | | | | | | | | | | | | | V | X | | | X | | | | | | | |
| *Carex maritima* | | | | | | | | | | | | | | | V | | | V | | V | X | | | X | | | | | | | |
| *Carex membranacea* | | V | | | X | | | | | X | V | V | | V | | V | | V | V | V | X | V | | X | | | | | | | |
| *Carex myosuroides* | | V | | | X | | | | | X | V | V | V | | o | | V | V | V | V | X | | | X | | | | | | | |
| *Carex nardina* | | V | | | X | | | | | X | V | V | V | | | V | V | V | V | V | X | | v | X | | | | | | | |
| *Carex rupestris* | | | | | | | | | | | | | V | | V | | | V | V | V | X | V | | X | | | | | | | |
| *Carex scirpoidea* subsp. *scirpoidea* | | | | | | | | | | | | | | | | | | V | V | V | X | | | X | | | | | | | |
| *Carex simpliciuscula* subsp. *subholarctica* | | | | | | | | | | | | | | | | | | V | | V | X | | | X | | | | | | | |
| *Carex supina* subsp. *spanio-carpa* | | | | | | | | | | | | | | | V | | V | V | V | V | X | | | X | | | | | | | |
| *Carex ursina* | | | | | | V | | | | X | | | | | | | | | | | | | | | | | | | | | |
| *Carex* sp. (not reproductive) | | | | | | | | | | | | | | | | | | | | | | | | | | p | | | | | |
| *Cassiope tetragona* subsp. *tetragona* | | V | p | V | X | o | v | p | | X | V | V | V | p | p | V | p | V | V | V | X | o | | X | o | p | v | o | o | X | X |
| *Cerastium alpinum* subsp. *alpinum* | | | | | | | v | | | X | | | | | | | | V | | | | | | X | | | | | | | |
| *Cerastium arcticum* | V | | | | X | p | v | | | X | V | V | | V | | V | V | V | V | V | X | V | | X | o | | v | | | X | X |
| *Chamaenerion latifolium* | | | | | | | o | p | | X | V | V | V | | V | V | V | V | V | V | X | p | | X | | | v | | | X | X |
| *Cherleria biflora* | V | | | | X | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| *Cochlearia groenlandica* | V | | | | X | V | | | | X | V | | | | | | | V | | V | X | | | X | | | | | | | |
| *Cystopteris fragilis* | | | | | | | | | | | | | V | | | | V | V | | V | X | | | X | | | | | | | |
| *Deschampsia cespitosa* subsp. *septentrionalis* | | V | | | X | | | | v | X | | | | | | | | | | | | | | | | | | | | | |
| *Deschampsia sukatschewii* | | | | | | | | | | | | | | | | | | | | | | | | | | | v | | | X | X |
| *Diapensia lapponica* | | | | | | | | | | | | | | | | | | | V | | X | | | X | | | | | | | |
| *Draba arctica* | | | | | | | | | | | | | | | | | | V | | V | X | | | X | | | | | | | |
| *Draba cinerea* | | V | | | X | | | | | X | | | | | V | | | V | | V | X | | | X | V | | | | | | X |
| *Draba corymbosa* | | | | | | | | | | | | | | | | | | V | | | | | | X | | V | | | | | X |
| *Draba fladnizensis* | | | | | | | | | | | v | | | | | | | V | | | | | | X | | | | | | | |
| *Draba lactea* | | | | | | | | | | | V | V | | | | V | V | V | V | | X | V | | X | V | V | v | | | X | X |
| *Draba micropetala* | V | | | | X | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| *Draba nivalis* | | V | | | X | | | | | X | V | | | | V | | V | V | V | V | X | | | X | | | v | | | X | X |
| *Draba subcapitata* | | | | | | | | | | | | | | | | | | | | | | | | | | | v | | | X | X |
| *Dryas integrifolia* subsp. *integrifolia* | | p | | | X | | | | | X | V | V | V | | p | V | V | V | V | V | X | V | | X | o | o | | | | | X |
| *Dryopteris fragrans* | | | | | | | | | | | | | | | | | | V | V | V | X | | | X | | | | | | | |
| *Dupontia fisheri* | | V | | | X | | | | | X | V | | | | | V | | V | V | V | X | | | X | | | v | | | X | X |
| *Empetrum nigrum* | | | | V | X | | | p | | X | V | V | V | | | V | V | V | V | V | X | o | | X | | | | | | | |

**Table 4.** Continued.

| | Coastal Lowlands | | | | | | | | | | Fiord and Mountain | | | | | | | | | | | | | Barnes Plateau | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Species** | **Kuugaaluk mouth** | **Kuugaaluk river** | **Kuugaaluk barrens** | **Kuugaaluk kames** | **Kuugaaluk subtotal** | **Niaqurnaaluk-Qassialuit** | **Ravenscraig Harbour*** | **Arviqtujuq Kangiqtua NW** | **Remote Peninsula**** | **Coastal Lowlands total** | **Atagulisaktalik** | **Refuge Harbour** | **Stewart Valley*** | **Tasialuk N*** | **Tasialuk S*** | **Tingijattut** | **Clark Fiord** | **Kangiqtualuk Uqquqti** | **Kangiqtualuk Agguqti camp** | **Kangiqtualuk Agguqti valley** | **Kangiqtualuk Agguqti subtotal** | **Gibbs Fiord*** | **Swiss Bay**** | **Fiord & Mountain total** | **Gibbs esker** | **"Marble Lake"** | **Barnes S Generator Lake** | **Barnes S meadow/hills** | **Barnes S Ice Cap edge** | **Barnes Plateau S subtotal** | **Barnes Plateau total** |
| *Epilobium arcticum* | | | | | | | | | | | | | | | | | | | | | | | | | | | v | | | X | X |
| *Equisetum arvense* subsp. *alpestre* | V | V | | V | X | | | | | X | V | | | | | | | | | | | | | X | | | v | | | X | X |
| *Equisetum variegatum* subsp. *variegatum* | | | | | | | | | | | | | | | | | | V | | | | | | X | | | | | | | |
| *Erigeron eriocephalus* | | | | | | | | | | | v | | | | | | | | | | | | | X | | | | | x | X | X |
| *Eriophorum angustifolium* | | o? | o? | | X | | o? | | | X | V | | V | | | V | V | | V | | X | | | X | | | | | | | |
| *Eriophorum brachyantherum* | | | | | | | | | | | | | | | | | | | | V | X | | | X | | | | | | | |
| *Eriophorum callitrix* | | | | | | | | | | | | | | | | | | V | | V | X | | | X | | | | | | | |
| *Eriophorum russeolum* subsp. *albidum* | | | | | | | | | | | | | | | | | V | | | | | | | X | | | | | | | |
| *Eriophorum scheuchzeri* subsp. *arcticum* | | V | | V | X | | o | | | X | V | V | | o | | V | | | | V | X | | | X | | | v | | | X | X |
| *Eriophorum triste* | V | | | | X | | | p? | | X | | V | | | | | | V | V | V | X | | | X | | | v | | | X | X |
| *Eutrema edwardsii* | | | | | | | | | v | X | | | | | V | | | V | | V | X | | | X | | | | | | | |
| *Festuca baffinensis* | | | | | | | | | | | | | | | | | | V | | | | | | X | | | | | | | |
| *Festuca brachyphylla* subsp. *brachyphylla* | | V | | | X | o? | o | | | X | V | | V | V | | V | V | | V | V | X | V | | X | | | v | | | X | X |
| *Festuca hyperborea* | V | | | | X | | v | | | X | | V | | | | V | V | V | V | | X | | | X | | | | V | | X | X |
| *Honckenya peploides* subsp. *diffusa* | V | | | | X | p | | | | X | V | V | | | | V | | V | V | V | X | | | X | | | | | | | |
| *Hulteniella integrifolia* | | | | | | | | | | | | | | | | | | V | | V | X | | | X | | | | | | | |
| *Huperzia arctica* | | V | V | | X | V | o | o | | X | V | V | | | | V | V | V | V | V | X | | | X | o | | v | | | X | X |
| *Juncus biglumis* | V | | | | X | | | | | X | V | V | V | | | V | | V | V | V | X | | | X | | | v | | | X | X |
| *Juncus leucochlamys* | | | | | | | | | | | | | | | | | | V | | V | X | | | X | | | | | | | |
| *Juncus triglumis* subsp. *albescens* | | | | | | | | | | | | | | | | | | V | | V | X | | | X | | | | | | | |
| *Koeleria spicata* | | V | | | X | | | | | X | v | | | | V | | | | | | | | | X | | | | | | | |
| *Koenigia islandica* | | | o | | X | V | | | | X | V | V | | | | | | | V | V | X | | | X | | | | | | | |
| *Leymus mollis* subsp. *villosissimus* | | | | | | | | | | | | | | | | | | | | V | X | | | X | | | | | | | |
| *Luzula confusa* | V | V | V | o | X | p | o | p | v | X | V | V | V | | | V | V | V | V | V | X | o | | X | p | | s | p | V | X | X |
| *Luzula nivalis* | | | o | p | X | V | o | o | v | X | V | V | | | | V | | V | V | V | X | V | | X | | | v | | o | X | X |
| *Melanocalyx uniflora* | | | | | | | | | v | X | V | | | | | | V | V | V | | X | | | X | o | | | | | | X |
| *Mertensia maritima* subsp. *tenella* | V | | | | X | V | | | | X | | | | | | | | | | | | | | | | | | | | | |
| *Micranthes foliolosa* | V | V | o | V | X | | | p | | X | V | V | | V | | p | V | | V | | X | | | X | | | v | | V | X | X |
| *Micranthes nivalis* | | | | | | | | V | | X | V | V | V | | V | V | V | V | V | V | X | | | X | o | | v | | | X | X |
| *Micranthes tenuis* | | | | | | | | | | | | | | | | | | V | V | | X | | | X | | | | | | | |
| *Oxyria digyna* | V | | | p | X | V | v | | | X | V | V | | | | V | V | V | V | V | X | | | X | | | v | o | | X | X |
| *Papaver labradoricum* | | | | | | V | | p | | X | V | | | | V | V | o? | V | | | | | | X | | | | | | | |
| *Papaver lapponicum* | V | | | p? | X | V | | | | X | V | V | V | | | | | | V | V | X | V | | X | V | | v | V | o? | X | X |

**Table 4.** Continued.

| | Coastal Lowlands | | | | | | | | | | Fiord and Mountain | | | | | | | | | | | | | Barnes Plateau | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Species** | **Kuugaaluk mouth** | **Kuugaaluk river** | **Kuugaaluk barrens** | **Kuugaaluk kames** | **Kuugaaluk subtotal** | **Niaqurnaaluk-Qassialuit** | **Ravenscraig Harbour*** | **Arviqtujuq Kangiqtua NW** | **Remote Peninsula**** | **Coastal Lowlands total** | **Atagulisaktalik** | **Refuge Harbour** | **Stewart Valley*** | **Tasialuk N*** | **Tasialuk S*** | **Tingijattut** | **Clark Fiord** | **Kangiqtualuk Uqquqti** | **Kangiqtualuk Agguqti camp** | **Kangiqtualuk Agguqti valley** | **Kangiqtualuk Agguqti subtotal** | **Gibbs Fiord*** | **Swiss Bay**** | **Fiord & Mountain total** | **Gibbs esker** | **"Marble Lake"** | **Barnes S Generator Lake** | **Barnes S meadow/hills** | **Barnes S Ice Cap edge** | **Barnes Plateau S subtotal** | **Barnes Plateau total** |
| *Pedicularis flammea* | | | | | | | | | | | | | p | | | | | V | V | V | X | | | X | | | | | | | |
| *Pedicularis hirsuta* | | V | | | X | V | | p | | X | V | V | | | V | V | V | V | V | V | X | V | | X | | V | v | | | X | X |
| *Pedicularis lanata* | | | | | | | | | | | | V | | V | | | | V | | | | | | X | | | | | | | |
| *Phippsia algida* | V | | | V | X | | V | V | | X | | | | | | | | | V | | X | | | X | | | V | | V | X | X |
| *Physaria arctica* | | | | | | | | | | | | | | | | | | V | | V | X | | | X | | | | | | | |
| *Pleuropogon sabinei* | | | | V | X | | | | | X | V | | | | | | | | | | | | | X | | | v | V | | X | X |
| *Poa abbreviata* | | | | | | | | | | | | | | | | | | | | V | X | | | X | | | | | | | |
| *Poa arctica* subsp. *arctica* | V | p | o? | V | X | o | o | p | | X | V | V | V | o | p | p | | V | V | V | X | V | | X | V | | v | V | V | X | X |
| *Poa arctica* subsp. *caespitans* | | | | | | | | | | | | | | | | V | | | V | | X | | | X | | | | | | | |
| *Poa glauca* subsp. *glauca* | | | | | | | | | | | | | | | V | | V | V | V | V | X | V | | X | o | | v | | | X | X |
| *Poa hartzii* | | | | | | | | | | | | | | | | | | V | | | | | | X | | | | | | | |
| *Potentilla arenosa* subsp. *arenosa* | | | | | | | | | | | | | | | | | | V | V | | | | | X | | | | | | | |
| *Potentilla arenosa* subsp. *chamissonis* | | | | | | | | | | | | | | | | | | | | V | X | | | X | | | | | | | |
| *Potentilla hyparctica* subsp. *hyparctica* | V | V | | | X | | v | | | X | V | V | | | | V | | V | V | V | X | | | X | | V | | V | | X | X |
| *Potentilla nivea* | | | | | | | | | | | | | | | V | | | | | | | | | X | | | | | | | |
| *Potentilla pulchella* | | | | | | | | | | | | | | | | | | | | V | X | | | X | | | | | | | |
| *Potentilla subgorodkovii* | | | | | | | | | | | | | | | | | | | | V | X | | | X | | | | | | | |
| *Potentilla subvahliana* | | | | | | | | | | | | | | | | | | V | V | V | X | | | X | V | V | | | | | X |
| *Potentilla vahliana* | | | | | | | | p | | X | V | | V | | V | V | V | V | | | | V | | X | | | | | | | |
| *Puccinellia angustata* | | V | | | X | | | | v | X | | | | | | | | | | V | X | | | X | | | | | | | |
| *Puccinellia bruggemannii* | V | | | | X | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| *Puccinellia phryganodes* subsp. *neoarctica* | V | | | | X | V | | | | X | | | | | | V | | | V | | X | | | X | | | | | | | |
| *Puccinellia tenella* subsp. *langeana* | | | | | | | | | | | V | V | | | | V | | V | V | V | X | | | X | | | | | | | |
| *Pyrola grandiflora* subsp. *grandiflora* | | | | | | | | V | v | X | V | V | V | | | v | V | V | V | V | X | V | | X | | | | | | | |
| *Ranunculus arcticus* | | | | | | | | | | | | | | | | | | | | V | X | | | X | | | | | | | |
| *Ranunculus hyperboreus* subsp. *hyperboreus* | | | | | | | p | | | X | V | V | | | | | | | | V | X | | | X | | | v | | | X | X |
| *Ranunculus nivalis* | V | V | | | X | | | p | | X | V | V | | | | V | | V | V | | X | | | X | | | v | | | X | X |
| *Ranunculus pygmaeus* | V | | | | X | | o | | | X | V | | | | | | | | | | | | | X | | | | | | | |
| *Rhododendron lapponicum* | | | | | | | | | | | | | V | | V | | V | V | V | V | X | | | X | | | | | | | |
| *Rhododendron tomentosum* subsp. *decumbens* | | V | | | X | | | | | X | V | | | | | V | | | | | | | | X | | | | | | | |
| *Sabulina rubella* | | | | | | | | | | | | | | | V | | | V | V | V | X | | | X | | | v | | | X | X |
| *Sabulina stricta* | | | | | | | | | | | | | | | | | | V | | V | X | | | X | | | | | | | |
| *Sagina caespitosa* | | | | | | | | | | | | | | | | | V | | | | | | | X | | | | | | | |

**Table 4.** Continued.

| | Coastal Lowlands | | | | | | | | | | Fiord and Mountain | | | | | | | | | | | | | | Barnes Plateau | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Species** | **Kuugaaluk mouth** | **Kuugaaluk river** | **Kuugaaluk barrens** | **Kuugaaluk kames** | **Kuugaaluk subtotal** | **Niaqurnaaluk-Qassialuit** | **Ravenscraig Harbour*** | **Arviqtujuq Kangiqtua NW** | **Remote Peninsula**** | **Coastal Lowlands total** | **Atagulisaktalik** | **Refuge Harbour** | **Stewart Valley*** | **Tasialuk N*** | **Tasialuk S*** | **Tingijattut** | **Clark Fiord** | **Kangiqtualuk Uqquqti** | **Kangiqtualuk Agguqti camp** | **Kangiqtualuk Agguqti valley** | **Kangiqtualuk Agguqti subtotal** | **Gibbs Fiord*** | **Swiss Bay**** | **Fiord & Mountain total** | **Gibbs esker** | **"Marble Lake"** | **Barnes S Generator Lake** | **Barnes S meadow/hills** | **Barnes S Ice Cap edge** | **Barnes Plateau S subtotal** | **Barnes Plateau total** |
| *Sagina nivalis* | V | | | | X | | | | | X | V | V | | | | V | | V | V | V | X | | | X | | | v | | | X | X |
| *Salix arctica* | p | p | o | | X | p | v | p | | X | V | V | V | V | p | V | V | V | V | V | X | V | | X | o | p | v | | | | X |
| *Salix arctica* × *S. arctophila* | V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *Salix herbacea* | V | p | o | o | X | p | v | p | | X | V | V | | p | | V | V | V | V | V | X | o | | X | | | v | o | | X | X |
| *Salix reticulata* | | | | | | | | | v | X | V | V | | | | V | V | V | V | V | X | | | X | | | | | | | |
| *Salix richardsonii* | | | | | | | | | | | | | | | V | V | | V | V | V | X | | | X | | p | v | | | | X |
| *Saxifraga aizoides* | | | | | | | | | | | | | | | | | | V | | V | X | | | X | | | | | | | |
| *Saxifraga cernua* | | V | | | X | | | | | X | V | V | | | V | V | | V | V | V | X | | | X | | | v | | V | X | X |
| *Saxifraga cespitosa* subsp. *cespitosa* | | | | | | | | | | | V | | | | | p | | V | | V | X | | | X | V | | | | | | X |
| *Saxifraga hyperborea* | | | | | | | | | | | V | - | | | | | | V | | | | | | X | | | v | | | X | X |
| *Saxifraga oppositifolia* subsp. *oppositifolia* | | | | | | | | | | | V | V | | | | V | V | V | V | V | X | o | | X | V | V | v | | | X | X |
| *Saxifraga rivularis* subsp. *arctolitoralis* | | | | | | | | p | | X | | V | | | | | | | V | | X | | | X | | | | | V | X | X |
| *Saxifraga rivularis* subsp. *rivularis* | V | | | V | X | | V | p? | | X | | | | | | V | | | V | | X | | | X | | | | | | | |
| *Saxifraga tricuspidata* | | | | | | | | | | | V | V | V | | o | V | V | V | V | V | X | p | | X | p | p | | | | | X |
| *Silene acaulis* | V | | | | X | | v | | | X | V | V | | | p | V | p | V | V | V | X | V | | X | p | | | | | | X |
| *Silene involucrata* subsp. *involucrata* | | | | | | | | | | | V | V | V | | | V | V | V | V | V | X | | | X | V | | | | | | X |
| *Silene sorensenis* | | V | | | X | | | | | X | | | | | V | | | | | | | | | X | | | | | | | |
| *Silene uralensis* subsp. *arctica* | | | | | | | | | | | V | | | | | V | | V | V | V | X | | | X | | | v | | | X | X |
| *Stellaria humifusa* | V | | | | X | V | | | | X | | | | | | | | V | | | | | | X | | | | | | | |
| *Stellaria longipes* | | V | | | X | | v | p | | X | V | V | V | | V | p | V | V | V | V | X | o | | X | o | | v | o | | X | X |
| *Taraxacum ceratophorum* | | V | | | X | | | | v | X | V | | | V | V | V | V | V | V | V | X | | | X | | | | | | | |
| *Taraxacum holmenianum* | V | | | | X | p | | | | X | | | | | | | | V | | | | | | X | | | | | | | |
| *Taraxacum phymatocarpum* | | | | | | | | | v | X | V | | | | | | | V | | V | X | | | X | | | | | | | |
| *Tofieldia coccinea* | | | | | | | | | | | | V | V | | V | | | V | V | V | X | | | X | | | | | | | |
| *Tofieldia coccinea* × *T. pusilla* | | | | | | | | | | | | | | | | | | | | V | | | | | | | | | | | |
| *Tofieldia pusilla* | | | | | | | | | | | | | | | | | | V | | V | X | | | X | | | | | | | |
| *Tripleurospermum maritimum* subsp. *phaeocephalum* | | | | | | V | | | | X | | | | | | | | | | | | | | | | | | | | | |
| Vaccinium uliginosum | | | o | | X | | v | p | | X | V | V | V | o | o | v | V | V | V | V | X | | | X | | | | | | | |
| *Vaccinium vitis-idaea* subsp. *minus* | | | | | | | | V | | X | | | | | | | | | | | | | | | | | | | | | |
| *Woodsia alpina* | | | | | | | | | | | | | | | | | | V | V | V | X | | | X | | | | | | | |
| Totals: 144 | 34 | 36 | 14 | 15 | 62 | 24 | 25 | 28 | 11 | 78 | 69 | 50 | 32 | 17 | 38 | 57 | 47 | 98 | 77 | 93 | 108 | 27 | 3 | 132 | 22 | 15 | 42 | 11 | 10 | 44 | 58 |

Kangiqtualuk Uqquqti (98), Kangiqtualuk Agguqti – valley (93), Kangiqtualuk Agguqti – camp (77), Atagulisaktalik (69), Tingijattut (57), and Refuge Harbour (50), all localities within the Fiord and Mountain zone. In the coastal zone the combined total for the Kuugaaluk localities is 62 species, although the highest species diversity at an individual locality was much lower, the highest being along the river (36) and at the mouth of the Kuugaaluk (34). The locality with the highest species diversity on the Barnes Plateau was Generator Lake (42), followed by Gibbs Esker (22). The combined total for the Barnes Plateau S localities was 44.

**Mosses and Liverworts.** A total of 69 species of bryophytes (18 liverworts and 51 mosses) are recorded so far for Agguttinni TP (Table 5). These taxa belong to 48 genera and 30 families. The Polytrichaceae are represented by the most species (9 spp.), followed by the Calliergonaceae (6) and Dicranaceae (5). *Pohlia* Hedw., *Polytrichum* Hedw. and *Ptychostomum* Hornsch. are so far represented by 4 species each, and *Andreaea* Hedw., *Aulacomnium* Schwägr. and *Sarmenthypnum* Tuom. & T.J.Kop. ex L.E.Anderson, H.A.Crum & W.R.Buck are each represented by 3. Most genera (35) are represented by a single species.

Between 2017 and 2021 CMN staff made 58 collections of bryophytes in Agguttinni TP, representing 50 species (note that some collections include more than one species). Forty-five collections were made within the current park boundary by other collectors, representing 34 species. Of these, 29 species are reported based on pre-2017 collections and 5 additional species are reported based on 2022 collections. The 2022 collections by M. Raynolds and H. Bültmann included two species not previously collected. Since 2017, the known bryophyte flora of Agguttinni Territorial Park has more than doubled.

Given the opportunistic nature of the bryophyte component of the present study, comparing the species diversity of the three Park zones is not appropriate. Nonetheless, the presence of each species in each zone is preliminarily recorded in Table 5. Based both on their detection by multiple (three or more) collection teams, and their detection in all three zones, *Aulacomnium turgidum* (Wahlenb.) Schwägr., *Pogonatum dentatum* (Menzies ex Brid.) Brid., *Polytrichastrum alpinum* (Hedw.) G.L.Sm., *Polytrichum piliferum* Hedw., and *Racomitrium lanuginosum* appear to be among the most dominant, conspicuous bryophytes of Agguttinni TP.

**Table 5.** Bryophytes of Agguttinni Territorial Park. A summary of collectors, year collected, and presence in the three zones (Coastal Lowlands, Fiord and Mountain, Barnes Plateau, see Figure 1) is provided for each species. * Species or occurrences known only as subfossils.

| **Species** | **1950** (Hale, Dansereau, Wynne-Edwards) | **1974** (Miller) | **2018** (Doubt) or **2017** (Dare) | **2021** (Gillespie et al.) | **2022** (Raynolds & Bültmann) | **Coastal Lowlands** | **Fiord and Mountain** | **Barnes Plateau** |
|---|---|---|---|---|---|---|---|---|
| **MOSSES** | | | | | | | | |
| **Amblystegiaceae** | | | | | | | | |
| *Pseudocalliergon turgescens* Loeske* | | X* | | | | X* | | |
| *Sanionia uncinata* (Hedw.) Loeske | | | X | | X | | X | X |
| **Andreaeaceae** | | | | | | | | |
| *Andreaea alpina* Hedw. | | | X | | | | X | |
| *Andreaea blyttii* Schimp. | | | | X | | | X | |
| *Andreaea rupestris* Hedw. | | | X | | | | X | |
| **Aongstroemiaceae** | | | | | | | | |
| *Aongstroemia longipes* (Sommerf.) Bruch & Schimp. | | | | X | | | | X |
| **Aulacomniaceae** | | | | | | | | |
| *Aulacomnium acuminatum* (Lindb. & Arnell) Kindb. | X | | | | | | X | |
| *Aulacomnium palustre* (Hedw.) Schwägr. | X | | X | | | | X | |
| *Aulacomnium turgidum* (Wahlenb.) Schwägr. | X | | X | X | X | X | X | X |
| **Bartramiaceae** | | | | | | | | |
| *Conostomum tetragonum* (Hedw.) Lindb. | X | | X | | | | X | X |
| **Bryaceae** | | | | | | | | |
| *Ptychostomum arcticum* (R.Br.) J.R.Spence | X | | | | | | | X |
| *Ptychostomum calophyllum* (R.Br.) J.R.Spence | | | | X | | | X | |
| *Ptychostomum cyclophyllum* (Schwägr.) J.R.Spence | X | | | | | | | X |
| *Ptychostomum nitidulum* (Lindb.) J.R.Spence | X | | | | | | | X |

**Table 5.** Continued.

| Species | 1950 (Hale, Dansereau, Wynne-Edwards) | 1974 (Miller) | 2018 (Doubt) or 2017 (Dare) | 2021 (Gillespie et al.) | 2022 (Raynolds & Bültmann) | Coastal Lowlands | Fiord and Mountain | Barnes Plateau |
|---|---|---|---|---|---|---|---|---|
| **Calliergonaceae** | | | | | | | | |
| *Loeskypnum wickesiae* (Grout) Tuom. | | | X | | | | X | |
| *Sarmentypnum exannulatum* (Schimp.) Hedenäs | | X* | | X | | X* | X | |
| *Sarmentypnum pseudosarmentosum* (Cardot & Thér.) Hedenäs | | | X | | | | X | |
| *Sarmentypnum sarmentosum* (Wahlenb.) Tuom. & T.J.Kop. | | | X | | | | X | |
| *Scorpidium cossonii* (Schimp.) Hedenäs | | | X | | | | X | |
| *Scorpidium revolvens* (Sw.) Rubers | | | | X | | | X | |
| **Campyliaceae** | | | | | | | | |
| *Hygrohypnum polare* (Lindb.) Loeske | X | | | | | | X | |
| *Hygrohypnum luridum* (Hedw.) Jenn. | X | | | | | | X | |
| **Dicranaceae** | | | | | | | | |
| *Dicranella subulata* (Hedw.) Schimp. | | | X | | | | X | |
| *Dicranum groenlandicum* Brid. | | | X | | | | X | |
| *Dicranum spadiceum* J.E.Zetterst. | | | X | | | | X | |
| *Kiaeria starkei* (F.Weber & D.Mohr) I.Hagen | X | | | | | | | X |
| *Oncophorus wahlenbergii* Brid. | | | X | | | | X | |
| **Ditrichaceae** | | | | | | | | |
| *Ceratodon purpureus* (Hedw.) Brid. | X | | | | | | | X |
| *Flexitrichum flexicaule (Schwägr.)* Ignatov & Fedosov | | | X | | X | | X | X |
| **Grimmiaceae** | | | | | | | | |
| *Racomitrium lanuginosum* (Hedw.) Brid. | X | | X | X | X | X | X | X |
| *Niphotrichum panschii* (Müll. Hal.) Bedn.-Ochyra & Ochyra | | | X | | | | X | |
| **Hylocomiaceae** | | | | | | | | |
| *Hylocomium splendens* (Hedw.) Schimp. | | | | | X | | | X |
| **Hypnaceae** | | | | | | | | |
| *Campylium bambergeri* (Schimp.) Hedenäs, Schlesak & D.Quandt | | | X | | | | X | |
| **Meesiaceae** | | | | | | | | |
| *Meesia uliginosa* Hedw. | | | | X | | | X | |
| Mniaceae | | | | | | | | |
| *Pohlia crudoides* (Sull. & Lesq.) Broth. | X | | | | | | | X |
| *Pohlia nutans* (Hedw.) Lindb. | X | | | X | | | X | X |
| *Pohlia obtusifolia* (Vill. ex Brid.) L.F.Koch | | | | X | | X | | |
| *Pohlia proligera* (Kindb. ex Breidl.) Lindb. ex Arnell | X | | | | | | | X |
| **Polytrichaceae** | | | | | | | | |
| *Oligotrichum falcatum* Steere | | | | | X | | | X |
| *Pogonatum dentatum* (Menzies ex Brid.) Brid. | X | | X | X | | X | X | X |
| *Polytrichastrum alpinum* (Hedw.) G.LSm. | X | | X | X | | X | X | X |
| *Polytrichum hyperboreum* R.Br. | | | | X | | | | X |
| *Polytrichum juniperinum* Hedw. | X | | | | | | X | X |
| *Polytrichum piliferum* Hedw. | X | | X | | X | X | X | X |
| *Polytrichum strictum* Menzies ex Brid. | | | | X | | | X | |
| *Psilopilum cavifolium* (Wilson) I.Hagen | X | | | X | | | | X |
| *Psilopilum laevigatum* (Wahlenb.) Lindb. | X | | | X | | | | X |

**Table 5.** Continued.

| Species | 1950 (Hale, Dansereau, Wynne-Edwards) | 1974 (Miller) | 2018 (Doubt) or **2017** (Dare) | 2021 (Gillespie et al.) | 2022 (Raynolds & Bültmann) | Coastal Lowlands | Fiord and Mountain | Barnes Plateau |
|---|---|---|---|---|---|---|---|---|
| **Rhytidiaceae** | | | | | | | | |
| *Rhytidium rugosum* (Hedw.) Kindb. | X | | | | | | X | |
| **Sphagnaceae** | | | | | | | | |
| *Sphagnum fuscum* (Schimp.) H.Klinggr. | | | X | | | X | X | |
| **Splachnaceae** | | | | | | | | |
| *Splachnum vasculosum* Hedw. | | | | X | | | X | |
| *Tetraplodon mnioides* (Hedw.) Bruch & Schimp. | X | | | | | | | X |
| **LIVERWORTS** | | | | | | | | |
| **Anastrophyllaceae** | | | | | | | | |
| *Neoorthocaulis binsteadii* (Kaal.) L.Söderstr., De Roo & Hedd. | | | X | | | | X | |
| *Orthocaulis cavifolius* H.Buch & S.W.Arnell | | | X | | | | X | |
| *Sphenolobus minutus* (Schreb. ex Cranz) Berggr. | | | X | | | | X | |
| **Antheliaceae** | | | | | | | | |
| *Anthelia juratzkana* (Limpr.) Trevis. | | | X | | | | X | |
| **Cephaloziaceae** | | | | | | | | |
| *Fuscocephaloziopsis pleniceps* (Austin) Váňa & L.Söderstr. | | | X | | | | X | |
| *Odontoschisma macounii* (Austin) Underw. | X | | X | | | | X | X |
| Cephaloziellaceae | | | | | | | | |
| *Cephaloziella varians* (Gottsche) Steph. | X | | | | | | X | |
| Gymnomitriaceae | | | | | | | | |
| *Gymnomitrion concinnatum* (Lightf.) Corda | | | X | | | | X | |
| *Gymnomitrion coralloides* Nees | X | | | | | | | X |
| *Marsupella arctica* (Berggr.) Bryhn & Kaal. | | | X | | | | X | |
| **Jungermanniaceae** | | | | | | | | |
| *Gymnocolea inflata* (Huds.) Dumort. | | | X | | | | X | |
| **Lepidoziaceae** | | | | | | | | |
| *Kurzia pauciflora* (Dicks.) Grolle | | | X | | | | X | |
| **Lophoziaceae** | | | | | | | | |
| *Trilophozia quinquedentata* (Huds.) Bakalin | | | X | | X | | X | X |
| Pseudolepicoleaceae | | | | | | | | |
| *Blepharostoma trichophyllum* (L.) Dumort. | X | | X | | | | X | X |
| **Ptilidiaceae** | | | | | | | | |
| *Ptilidium ciliare* (L.) Hampe | X | | | | | | | X |
| **Scapaniaceae** | | | | | | | | |
| *Diplophyllum taxifolium* (Wahlenb.) Dumort. | | | X | | | | X | |
| *Scapania paludosa* (Müll.Frib.) Müll. Frib. | | | X | | | | X | |
| *Scapania spitsbergensis* (Lindb.) K. Müller | | | X | | | | X | |
| **Totals:** 69 | 28 | 2 | 37 | 17 | 8 | 9 | 51 | 29 |

**Lichens.** We report a total number of 94 lichen species and infraspecific taxa (93 species, one with two subspecies) from Agguttinni TP, belonging to 46 genera and 23 families (Table 6). The macrolichens include 38 foliose species (those with a leaf-like appearance that are dorsiventral, including squamulose species, which have minute foliose lobes) and 30 fruticose species (those typically with long narrow branches that are the same on all sides). Twenty-six species are microlichens (crustose species that are embedded in the substrate and consequently have no lower surface). The primary photobiont of 87 species is an alga and for six species (*Euopsis pulvinata* (Schaer.) Vain., *Pannaria hookeri* (Borrer) Nyl., *Peltigera didactyla* (With.) J.R.Laundon, *P. rufescens* (Weis) Humb., *P. scabrosa* Th.Fr., *Protopannaria pezizoides* (Weber) P.M.Jørg. & S.Ekman) it is a cyanobacterium.

In 2021, we made 155 collections of lichens in the park representing 53 species and infraspecific taxa (52 species, one with two subspecies). Our focus was on macrolichens and we feel that this group was covered well in Agguttinni TP at the sites we visited. Microlichens (crustose species) were not the target of our survey, and we feel that they are under-represented in our results for Agguttinni TP and in the results from previous studies in the park (e.g., Hale 1954).

**Table 6.** Lichens of Agguttinni Territorial Park. A summary of collectors, year collected, and presence in the three zones (Coastal Lowlands, Fiord and Mountain, Barnes Plateau, see Figure 1) is provided for each species and infraspecific taxa.

| Species | 1950 (Hale) | 2017 (Dare) | 2021 (Gillespie et al.) | 2022 (Bültmann & Raynolds) | Coastal Lowlands | Fiord and Mountain | Barnes Plateau |
|---|---|---|---|---|---|---|---|
| **Candelariaceae** | | | | | | | |
| *Candelariella canadensis* H.Magn. | | | X | | | X | |
| **Cladoniaceae** | | | | | | | |
| *Cladonia amaurocraea* (Flörke) Schaer. | X | X | X | | X | | X |
| *Cladonia bellidiflora* (Ach.) Schaer. | | | X | | X | | |
| *Cladonia borealis* S. Stenroos | X | X | | | X | | X |
| *Cladonia cenotea* (Ach.) Schaer. | | | X | | | X | |
| *Cladonia coccifera* (L.) Willd. | X | | X | | X | X | X |
| *Cladonia cyanipes* (Sommerf.) Nyl. | | | | X | | | X |
| *Cladonia deformis* (L.) Hoffm. | X | | | | | | X |
| *Cladonia gracilis* (L.) Willd. subsp. *gracilis* | | | X | | X | | |
| *Cladonia luteoalba* A. Wilson & Wheldon | | | | X | | | X |
| *Cladonia macrophylla* (Schaer.) Stenh. | X | | | | | | X |
| *Cladonia mitis* Sandst. | X | | X | | X | X | X |
| *Cladonia pleurota* (Florke) Schaer. | | | X | | X | X | X |
| *Cladonia pyxidata* (L.) Hoffm. | X | | | | | | X |
| *Cladonia rangiferina* (L.) Weber ex F.H.Wigg. | | | X | | | X | |
| *Cladonia sulphurina* (Michx.) Fr. | | | X | | X | X | |
| *Pilophorus cereolus* (Ach.) Th.Fr. | | | | X | | | X |
| **Graphidaceae** | | | | | | | |
| *Diploschistes muscorum* (Scop.) R.Sant. | | | X | | | | X |
| **Harpidiaceae** | | | | | | | |
| *Euopsis pulvinata* (Schaer.) Vain. | | | | X | | | X |
| **Hygrophoraceae** | | | | | | | |
| *Lichenomphalia alpina* (Britzelmayr) Redhead et al. | | | X | | | X | X |
| *Lichenomphalia hudsoniana* (H.S.Jenn.) Redhead et al. | | | X | | X | X | X |
| **Hymeneliaceae** | | | | | | | |
| *Ionaspis lacustris* (With.) Lutzoni | X | | | | | | X |
| *Tremolecia atrata* (Ach.) Hertel | X | | | X | | | X |
| **Icmadophilaceae** | | | | | | | |
| *Thamnolia subuliformis* (Ehrh.) W.L.Culb. | X | | X | | X | X | X |
| **Lecanoraceae** | | | | | | | |
| *Lecanora polytropa* (Ehrh.) Rabenh. | X | X | X | | X | X | X |

**Table 6.** Continued.

| Species | 1950 (Hale) | 2017 (Dare) | 2021 (Gillespie et al.) | 2022 (Bültmann & Raynolds) | Coastal Lowlands | Fiord and Mountain | Barnes Plateau |
|---|---|---|---|---|---|---|---|
| **Lecidaceae** | | | | | | | |
| *Lecidea lactea* Flörke ex Schaer. | X | | | | | | X |
| *Lecidea lapicida* (Ach.) Ach. | X | | | | | | X |
| *Lecidoma demissum* (Rutstr.) Gotth. Schneid. & Hertel | X | | | | | | X |
| *Porpidia flavicunda* (Ach.) Gowan | X | | | | | | X |
| *Porpidia melinodes* (Körb.) Gowan & Ahti | | | X | | X | | |
| **Lopadiaceae** | | | | | | | |
| *Lopadium pezizoideum* (Ach.) Körb. | | X | | | X | | |
| **Ochrolechiaceae** | | | | | | | |
| *Ochrolechia frigida* (Sw.) Lynge | | | X | | | X | X |
| **Ophioparmaceae** | | | | | | | |
| *Ophioparma lapponica* (Räsänen) Hafellner & R.W.Rogers | | | X | | X | X | |
| *Ophioparma ventosa* (L.) Norman | X | | | | | | X |
| **Pannariaceae** | | | | | | | |
| *Pannaria hookeri* (Borrer) Nyl. | X | | | | | | X |
| *Protopannaria pezizoides* (Weber) P. M.Jørg. & S.Ekman | X | | | | | | X |
| *Psoroma hypnorum* (Vahl) Gray | X | | X | | X | X | X |
| **Parmeliaceae** | | | | | | | |
| *Alectoria ochroleuca* (Hoffm.) Massal. | X | X | X | | X | X | X |
| *Allantoparmelia alpicola* (Th.Fr.) Essl. | X | | | X | | | X |
| *Arctocetraria andrejevii* (Oksner) Karnefelt & Thell | | | X | | X | | |
| *Arctocetraria nigricascens* (Nyl.) Karnefelt & Thell | X | | | | | | X |
| *Arctoparmelia centrifuga* (L.) Hale | | | X | | | X | |
| *Arctoparmelia incurva* (Pers.) Hale | X | | X | | X | | X |
| *Arctoparmelia seperata* (Th.Fr.) Hale | | | X | | | X | |
| *Brodoa oroarctica* (Krog) Goward | X | | | | | | X |
| *Bryocaulon divergens* (Ach.) Kärnefelt | X | | | | | | X |
| *Cetraria ericetorum* Opiz | | | X | | | | X |
| *Cetraria islandica* (L.) Ach. subsp. *islandica* | | | X | | | X | |
| *Cetraria islandica* subsp. *crispiformis* (Räsänen) Kärnefelt | X | | X | | X | X | X |
| *Cetraria laevigata* Rass. | | | X | | X | | |
| *Cetraria nigricans* Nyl. | X | | X | | X | X | X |
| *Cetrariella delisei* (Bory ex Schaer.) Karnefelt & Thell | X | X | X | | X | X | X |
| *Cetrariella fastigiata* (Delise ex Nyl.) Karnefelt & Thell | | | X | | | X | |
| *Dactylina arctica* (Hook.f.) Nyl. | X | | X | | X | X | X |
| *Dactylina ramulosa* (Hook.) Tuck. | X | | X | | X | X | X |
| *Flavocetraria cucullata* (Bellardi) Kärnefelt & Thell | X | X | X | | X | X | X |
| *Flavocetraria nivalis* (L.) Kärnefelt & Thell | X | X | X | | X | X | X |
| *Gowardia nigricans* (Ach.) Halonen et al. | X | X | | | X | | X |
| *Melanelia hepatizon* (Ach.) Thell | X | | X | | X | X | |
| *Melanelia stygia* (L.) Essl. | X | | | | | | X |
| *Parmelia omphalodes* (L.) Ach. | | X | | | X | | |
| *Parmelia skultii* Hale | | | X | | X | | |
| *Parmelia sulcata* Taylor | X | | X | | | X | X |
| *Pseudephebe minuscula* (Nyl. ex Arnold) Brodo & D.Hawksw. | X | | X | | X | | X |

| Species | 1950 (Hale) | 2017 (Dare) | 2021 (Gillespie et al.) | 2022 (Bültmann & Raynolds) | Coastal Lowlands | Fiord and Mountain | Barnes Plateau |
|---|---|---|---|---|---|---|---|
| *Pseudephebe pubescens* (L.) Choisy | X | | X | | X | X | X |
| *Vulpicida tilesii* (Ach.) J.-E.Mattsson & M.J.Lai | | | X | X | | X | X |
| **Peltigeraceae** | | | | | | | |
| *Peltigera aphthosa* (L.) Willd. | X | X | X | | X | X | X |
| *Peltigera didactyla* (With.) J.R.Laundon | X | | | | | | X |
| *Peltigera rufescens* (Weis) Humb. | X | | | | | | X |
| *Peltigera scabrosa* Th.Fr. | X | | | | | | X |
| *Solorina crocea* (L.) Ach. | X | | X | | X | X | X |
| **Pertusariaceae** | | | | | | | |
| *Lepra dactylina* (Ach.) Hafellner | | X | X | | X | X | |
| *Lepra pangyra* (Ach.) Hafellner | X | | | | | | X |
| *Pertusaria geminipara* (Th.Fr.) C. Knight ex Brodo | | | | X | | | X |
| *Pertusaria oculata* (Dicks.) Th.Fr. | X | | | | | | X |
| **Physciaceae** | | | | | | | |
| *Rinodina turfacea* (Wahlenb.) Körb. | X | | | | | | X |
| **Rhizocarpaceae** | | | | | | | |
| *Rhizocarpon copelandii* (Körb.) Th.Fr. | X | | | | | | X |
| *Rhizocarpon expallescens* Th.Fr. | X | | | | | | X |
| *Rhizocarpon geographicum* (L.) DC. | | X | X | | X | X | |
| *Rhizocarpon superficiale* (Schaer.) Vain. | X | | | | | | X |
| **Sphaerophoraceae** | | | | | | | |
| *Sphaerophorus fragilis* (L.) Pers. | | X | | | X | | |
| *Sphaerophorus globosus* (Huds.) Vain. | X | X | X | | X | X | X |
| **Stereocaulaceae** | | | | | | | |
| *Stereocaulon alpinum* Laurer | | | X | | X | X | |
| *Stereocaulon rivulorum* H.Magn. | X | | | | | | X |
| **Teloschistaceae** | | | | | | | |
| *Polycauliona candelaria* (L.) Frödén et al. | | | X | | X | X | |
| *Rusavskia elegans* (Link) S.Y.Kondr. & Kärnefelt | | X | X | | | X | |
| *Rusavskia sorediata* (Vain.) S.Y.Kondr. & Kärnefelt | | | X | | | X | |
| **Trapeliaceae** | | | | | | | |
| *Placopsis gelida* (L.) Lindsay | X | | | | | | X |
| **Umbilicariaceae** | | | | | | | |
| *Umbilicaria arctica* (Ach.) Nyl. | | X | | | | X | |
| *Umbilicaria cylindrica* (L.) Delise ex Duby | X | X | X | | X | X | X |
| *Umbilicaria hyperborea* (Ach.) Hoffm. | X | | X | | | X | X |
| *Umbilicaria proboscidea* (L.) Schrad. | X | | X | | X | X | X |
| *Umbilicaria torrefacta* (Lightf.) Schrad. | X | | | | | | X |
| *Umbilicaria vellea* (L.) Hoffm. | X | | | | | | X |
| **Totals:** 94 | 57 | 18 | 53 | 8 | 42 | 43 | 68 |

## Species checklist

Species are ordered by major group: 1) vascular plants, 2) bryophytes, and 3) lichens. Within the vascular plant section, order is by major group/class: ferns and allies (lycopods, horsetails, ferns) and flowering plants (monocots, dicots); within these main sections, order is alphabetical by family and then by species (as in Table 3). Within the bryophyte section, species are ordered by major group (mosses, liverworts) and then alphabetically by family and species (as in Table 5), and within the lichen section, species are ordered

alphabetically by family and species (as in Table 6). Synonyms are provided only when they have been commonly used in the Arctic botanical literature (e.g., Porsild and Cody 1980; Aiken et al. 2007). All plant collections were examined and identified by us unless otherwise indicated by the identifier's initials: Guy R. Brassard (GRB), Harumi Ochi (HO), Jan A. Janssens (JAJ), Linda M. Ley (LML), David G. Long (DGL) and William C. Steere (WCS) for bryophytes. All lichen collections were identified by us except for those collected and identified by Mason E. Hale.

In the checklist we provide sections on collections examined including localities and vouchers, brief descriptions, notes, habitat (substrate and habitat for bryophytes and lichens), and, where known, Inuit knowledge (Inuit Qaujimajatuqangit) for each species. Photographs are provided for the majority of vascular plant, 24 lichen, and some bryophyte species. Photos were taken in Agguttinni TP unless otherwise indicated.

All identified and confirmed collections are cited in the Materials Examined section. For all collections the primary collector, collection number, herbarium acronym (following Thiers 2023), and, where present, herbarium barcode or acquisition number, are cited. Collections are organized alphabetically by main locality. For brevity, we combined our three Barnes Plateau S localities (Table 1) plus previous collection localities from this area (Table 2) under "Barnes Plateau S", all Kuugaaluk localities (Tables 1, 2) under "Kuugaaluk", and the two Kangiqtualuk Agguqti localities (camp and valley). For each collection the specific collection site number is provided. For details on each collection site, including the collection date, specific locality information, elevation, and geographical coordinates, refer to Table 1 for our 2021 collections and Table 2 for all other collections.

Bryophyte collections often include one or more incidental species in addition to the main species collected (under which the collection is filed in the herbarium). We include these incidentals in the Materials Examined section when they are the only known collection of a species in the park or at a given locality in the park. They are cited as (incidental taxon on/of) a specific collection.

Inuktitut names and Inuit traditional uses, where known, are provided in the checklist. For vascular plants, names and uses recorded in Nunavut are given first (following Porsild 1953; Ootoova et al. 2001; Black et al. 2008; Burt et al., 2010; Davis and Banack 2012; Mallory and Aiken 2012), followed by those from Nunavik (northern Quebec) (Avataq Cultural Institute 1984; Blondeau et al. 2011; Clark 2012; Cuerrier et al. 2019). Less information is available on names and uses of bryophytes (Black et al. 2008; Blondeau et al. 2011; Clark 2012) and lichens (Burt et al. 2010; Blondeau et al. 2011) in Nunavut and Nunavik. For bryophytes, uses in other North American Arctic regions are also given (Labrador, Hantzsch 1931; Northwest Territories, Bandringa 2010; Greenland, Norton 2018; Alaska, Griffin 2001; general, Glime 2017, Harris 2008).

## Vascular Plants

### Lycophytes

### Lycopodiaceae

***Huperzia arctica* (Grossh. ex Tolm.) Sipliv.**

Arctic firmoss – lycopode arctique – siqpiijautit (as *H. selago*) (Ootoova et al. 2001); kakilaapit, kakillana, kakillanaqutik, kakillautik (Blondeau et al. 2011; as *H. selago* s.l.); kakillanaqutik, itsutik, itsutiujait (Clark 2012)

Figure 10

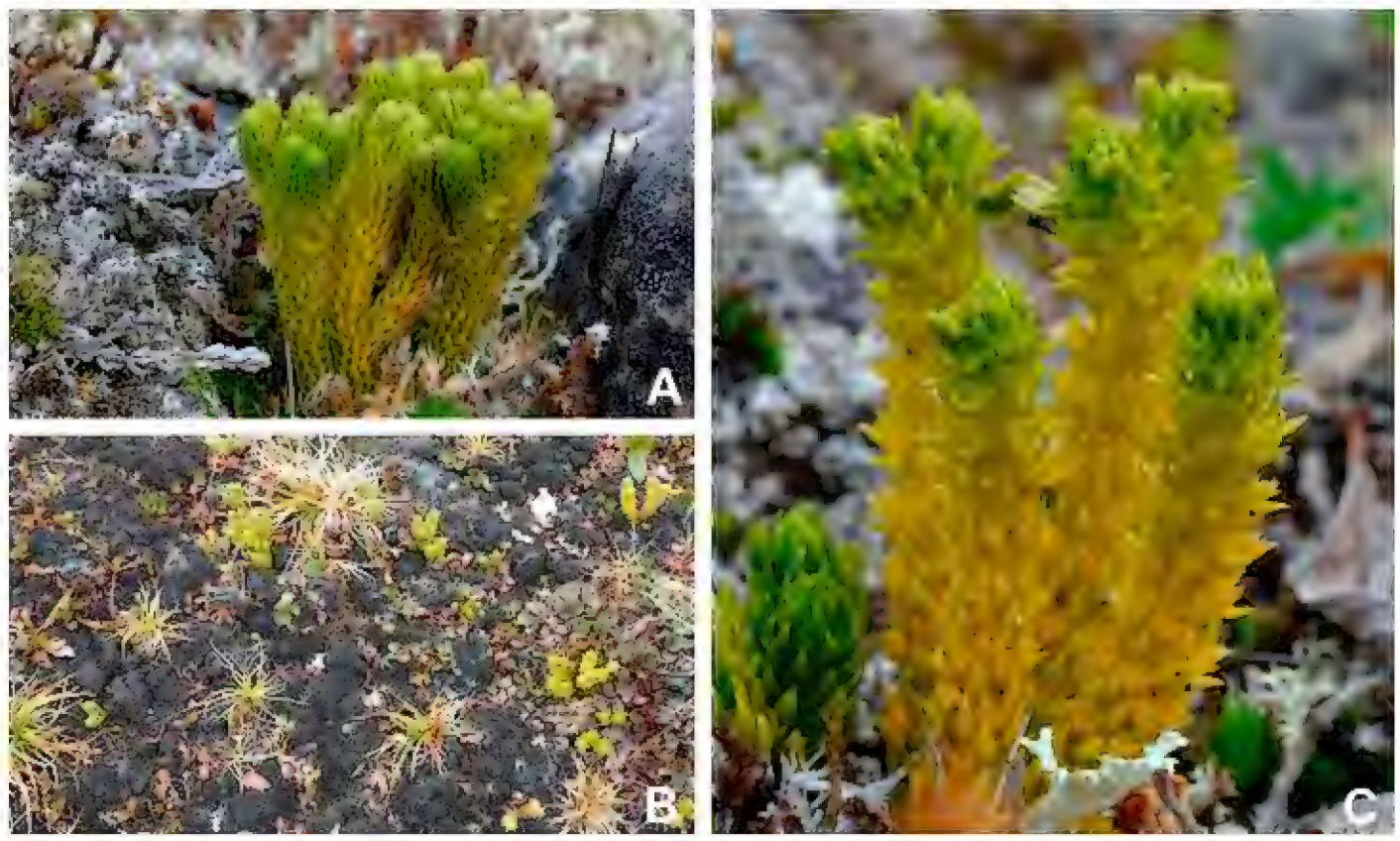


**Figure 10.** *Huperzia arctica*. **A.** Habit. **B.** Habitat. **C.** Stems with developing gemmae. *Gillespie et al. 12244*. Photos by L.J. Gillespie.

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.1 *Gillespie et al. 11467* (CAN 10112557) • Barnes Plateau S: site GL-21, *Raynolds & Bültmann MKR-2022-55* (CAN 10169288) • Clark Fiord: site 20.5, *Gillespie et al. 12350* (CAN 10112565) • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11796* (CAN 10112561); site 5.3, *Gillespie et al. 11866* (CAN 10112558); site 8.7, *Gillespie et al. 11980* (CAN 10112559); site 28.1, *Gillespie et al. 11634* (CAN 10112563) • Kuugaaluk: site 19.1, *Gillespie et al. 12287* (CAN 10112567); site A22.2, *Gillespie et al. 12451* (CAN 10112566) • Niaqurnaaluk-Qassialuit: site 18.2, *Gillespie et al. 12244* (CAN 10112560) site 18.2, • Refuge Harbour: site 11.2, *Gillespie et al. 12021* (CAN 10112564) • Tingijattut: site 15.2, *Gillespie et al. 12128* (CAN 10112562).

**Identification.** Small isolated tufts 1–10 cm high, yellow-green, with erect stems. Stems branched, densely covered in scalelike leaves. Sporangia borne in the axil of leaves. Also reproduces vegetatively by small leafy shoots called gemmae.

**Habitat.** Moist to wet tundra, mossy pond edges and lake shores.

**Notes.** Previously included within *Lycopodium selago* L.

**Inuit Qaujimajatuqangit.** This species is reported to be an intoxicant; when boiled in water the resulting dark liquid was used as an intoxicant and was reportedly the only tea that resulted in drunkenness (Ootoova et al. 2001). It is also used to clean the eyes; the Inuit name *Siqpiijautit* means "that which is used to remove mucus from the eye." In Nunavik, this plant is also recording as being used as a clothes brush (Blondeau et al. 2011) and as fuel (Clark 2012).

**Monilophytes**
**Equisetaceae**

***Equisetum arvense* L. subsp. *alpestre* (Wahlenb.) Schönsw. & Elven**
Alpine field horsetail – prêle des champs alpin – sitjamiutaq, nirliup niqingit (Blondeau et al. 2011)
Figure 11A–D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 24.6, *Gillespie et al. 11555* (CAN 10112555) • Barnes Plateau S: site GL-16, *Raynolds & Bültmann MKR-2022-29* (CAN 10169260) • Kuugaaluk: site 16.5, *Gillespie et al. 12211* (CAN 10112554); site 19.4, *Gillespie et al. 12303* (CAN 10112551), *Gillespie et al. 12307* (CAN 10112552).

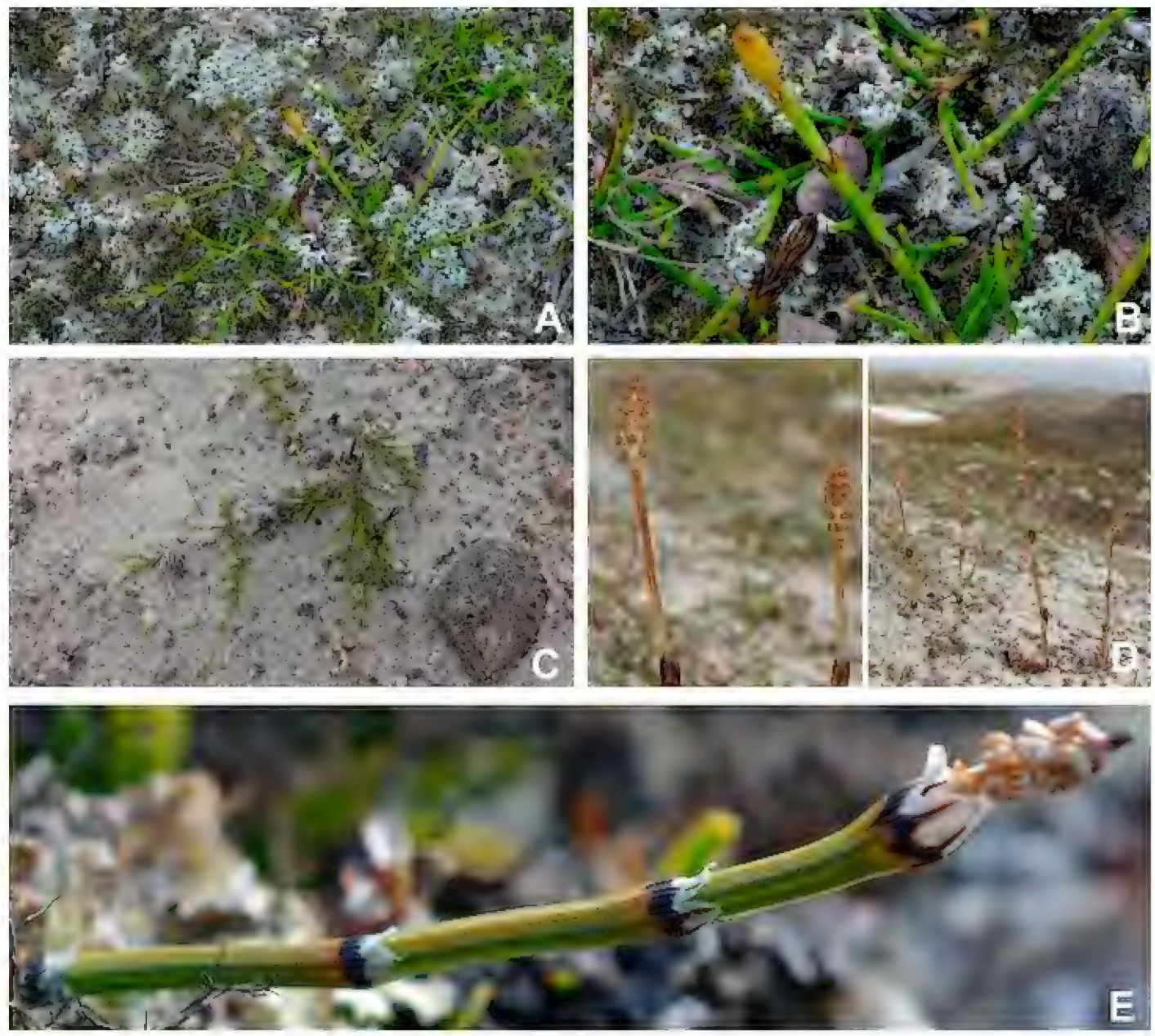


**Figure 11. A–D.** *Equisetum arvense* subsp. *alpestre*. **A.** Habit, **B.** Strobilus on green branched stem. *Gillespie et al. 12211*. **C.** Habit. *Gillespie et al. 12303*. **D.** Strobili on achlorophyllous (non-green) unbranched stems. *Gillespie et al. 12307*. **E.** *Equisetum variegatum* subsp. *variegatum*, stem detail. *Gillespie et al. 11625*. Photos by L.J. Gillespie (A–D) and P.C. Sokoloff (E).

**Identification.** Sterile and fertile stems separate. Sterile stems green, many-branched, with branches arranged in whorls. Fertile stems thicker, unbranched or branched, pale tan or green, ending in strobilus.

Subspecies *alpestre* (sometimes called subsp. *boreale*), the more northerly of the two subspecies, can be distinguished from subsp. *arvense* by its smaller size, more slender stems, fertile stems often green and branched, and smaller strobili (usually <1.5 cm long) (Schönswetter et al. 2001).

**Habitat.** Moist to wet sandy soil, wet turf in tundra.

**Inuit Qaujimajatuqangit.** Davis and Banack (2012) reported its use as a tea or maceration for treating urinary tract infections among Inuinnait of western Nunavut. In Nunavik this species is reported to be used as a bookmark and to wipe hands (Blondeau et al. 2011).

***Equisetum variegatum* Schleich. subsp. *variegatum* (Bong.) Á. Löve**
Variegated scouring-rush – prêle panachée
Figure 11E

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Uqquqti: site 28.1, *Gillespie et al. 11625* (CAN 10112556).

**Identification.** Stems straight, stiff, green, branched only at base, each capable of producing a terminal strobilus. Sheaths at nodes with 6–8 teeth.

**Habitat.** Wet turf.

**Notes.** Very small plants were collected in the vicinity of camp at the head of Kangiqtualuk Uqquqti. This is the only location for the species known in the park.

**Cystopteridaceae**

***Cystopteris fragilis* (L.) Bernh.**
Fragile fern – cystoptère fragile – napaarturaapik, uivvaujaq, uivva (Blondeau et al. 2011)
Figure 12A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Clark Fiord: site 20.1, *Gillespie et al. 12341* (CAN 10112569) • Kangiqtualuk Agguqti: site 21.4, *Gillespie et al. 12422* (CAN 10112572) • Kangiqtualuk Uqquqti: site 28.1, *Gillespie et al. 11642* (CAN 10112571); site 27.1, *Gillespie et al. 11615b* (CAN 10112570) • Stewart Valley: site 15.1, *Gillespie et al. 12111* (CAN 10112568).

**Identification.** Small fern with thin, delicate, finely divided fronds. Sori on underside of fronds, roundish with hoodlike indusium.

**Habitat.** Rocky slopes and ridges.

**Notes.** Although found at four localities in the park, this fern was generally rare at each locality. All three ferns recorded in the park were found only in the Mountain and Fiord zone.

**Inuit Qaujimajatuqangit.** None reported in Nunavut. In Nunavik, this species is reported to be a tea plant, and used as play tobacco for children (Blondeau et al. 2011).

**Dryopteridaceae**

***Dryopteris fragrans* (L.) Schott**
Fragrant wood fern – dryoptère odorante
Figure 12C, D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 6.5, *Gillespie et al. 11894* (CAN 10112574); site 21.1, *Gillespie et al. 12414* (CAN 10112573) • Kangiqtualuk Uqquqti: site 27.1, *Gillespie et al. 11622* (CAN 10112575).

**Identification.** Coarse, densely tufted fern 10–20 cm high. Fronds thick, leathery, erect, green above, with reddish brown scales beneath; old fronds persistent and shrivelled at base of plant.

**Notes.** This fern was seen only in the sheltered valleys at the head of Kangiqtualuk Agguqti and Kangiqtualuk Uqquqti. Although generally uncommon, it was very abundant on rocky river banks at the southern end of the large valley at the head of Kangiqtualuk Agguqti.

**Habitat.** Rocky slopes and ridges.

**Figure 12. A–B.** *Cystopteris fragilis*. **A.** Habit. Gillespie et al. 12341. **B.** Frond detail. *Gillespie et al. 12422*. **C–D.** *Dryopteris fragrans*. **C.** Habit. Valley at head of Kangiqtualuk Agguqti, July 21, 2021. **D.** Fertile fronds. Slope above Sam Ford River near head of Kangiqtualuk Uqquqti, July 30, 2021. **E–F.** *Woodsia alpina*. **E.** Habit. *Gillespie et al. 12414*. **F.** Frond Detail. *Gillespie et al. 11896*. Photos by L.J. Gillespie (A–B, D–E) and P.C. Sokoloff (C, F).

## Woodsiaceae

### *Woodsia alpina* (Bolton) Gray

Alpine woodsia – Woodsie alpine – Napaarturaapik, Uivvaujaq, Uivva (Blondeau et al. 2011)
Figure 12E, F

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 7.1, *Gillespie et al. 11896* (CAN 10112577); site 21.3, *Gillespie et al. 12421* (CAN 10112576) • Kangiqtualuk Uqquqti: site 27.1, *Gillespie et al. 11615a* (CAN 10112578).

**Identification.** Low densely tufted ferns 3–10 cm high, with narrow pinnate fronds. Fronds with scattered hairs or scales on the undersurface (mostly on the rachis), petioles reddish brown near the base, and pinnae (frond segments) ovate to triangular, longer than wide. Sori on veins on frond undersurface, each covered with indusium divided into many hairlike segments.

A similar species, *Woodsia glabella* R.Br., is much more common in the Canadian Arctic Islands but was not collected in the park. *Woodsia glabella* has completely glabrous fronds with petioles green or pale-coloured throughout, and fan-shaped pinnae that are usually wider than long.

**Habitat.** Rocky slopes and ridges, dry, stony river terraces.

**Notes.** This species was uncommon in the park and found only in sheltered valleys at the heads of Kangiqtualuk Agguqti and Kangiqtualuk Uqquqti. These collections are among the northernmost records of the species in Canada, along with one confirmed record from Ellesmere Island (*Murray & Yurtsev 10254 CAN*). Elsewhere in the Canadian Arctic Islands, this primarily boreal and Low Arctic species is known only from southern Baffin Island and Southampton Island.

**Inuit Qaujimajatuqangit.** None reported in Nunavut. In Nunavik, this species is reported to be used for tea and as play tobacco for children (Blondeau et al. 2011).

**Angiosperms**
**Monocots**
**Cyperaceae**

***Carex aquatilis* Wahlenb. subsp. *stans* (Drejer) Hultén**
Arctic water sedge – carex mineur – kilirnait (Mallory and Aiken 2012); iviit, ivisuka (Blondeau et al. 2011)
Figure 13A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 24.2, *Gillespie et al. 11546* (CAN 10112601) • Barnes Plateau S: site GL-17, *Raynolds & Bültmann MKR-2022-61* (CAN 10169271) • Clark Fiord: site 20.2, *Gillespie et al. 12352b* (CAN 10112606) • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11811* (CAN 10112603); site 8.7, *Gillespie et al. 11974* (CAN 10112602) • Kangiqtualuk Uqquqti: site 29.1, *Gillespie et al. 11684* (CAN 10112604) • Refuge Harbour: site 11.1, *Gillespie et al. 12013* (CAN 10112600) • Tasialuk S: site 26.6, *Gillespie et al. 11603* (CAN 10112605).

**Identification.** Erect, rhizomatous sedges approximately 40 cm tall, forming conspicuous dense stands. Inflorescence of 1 or more erect, terminal staminate spikes, with 2–3 sessile, erect pistillate spikes below. Pistillate scales blackish-brown with central pale green stripe. Perigynia green; stigmas 3.

This species is similar to *C. bigelowii* subsp. *bigelowii* (which is also common in the park) but is distinguished by a lower floral bract equaling or exceeding the inflorescence.

**Habitat.** Wet tundra, in wet depressions, shallow water, and pond edges.

**Inuit Qaujimajatuqangit.** This species was used as a firestarter (Mallory and Aiken 2012).

**Figure 13. A–B.** *Carex aquatilis* subsp. *stans*. **A.** Habitat, **B.** Inflorescence. *Gillespie et al. 11811*. **C–E.** *Carex atrofusca*. **C.** Habit. **D.** Inflorescences. **E.** Habitat. *Gillespie et al. 12176*. Photos by L.J. Gillespie (A, E) and P.C. Sokoloff (B–D).

***Carex atrofusca* Schkuhr**

Dark-brown sedge – carex brun foncé – iviit, ivisuka, ivitsukak (Blondeau et al. 2011)

Figure 13C–E

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 6.1, *Gillespie et al. 11875* (CAN 10112610); site 8.5, *Gillespie et al. 11967* (CAN 10112611) • Kangiqtualuk Uqquqti: site 28.5, *Gillespie et al. 11666* (CAN 10112607) • Tasialuk S: site 26.6, *Gillespie et al. 11602* (CAN 10112609) • Tingijattut: site 15.8, *Gillespie et al. 12176* (CAN 10112608).

**Identification.** Cespitose, glaucous sedges with erect to ascending culms about 20 cm long, and short, wide basal leaves. Inflorescence of 1 terminal staminate spike (sometimes with pistillate flowers at the base) and 2 or more dangling, wide, dark black pistillate spikes below on capillary peduncles. Pistillate scales dark black. Perigynia dark black, beaked; stigmas 3.

**Notes.** This species is similar to *Carex fuliginosa* subsp. *misandra*, but is distinguished by its flat, glaucous leaves in contrast to the deeper green, channeled leaves of *C. fuliginosa* subsp. *misandra*.

**Habitat.** Wet tundra.

***Carex bigelowii* Torr. ex Schwein. subsp. *bigelowii***

Bigelow's sedge – carex de Bigelow – iviit, ivisuka, ivitsukak (Blondeau et al. 2011)

Figure 14A–C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-2, *Dansereau 500725-0572* (MT 00176801); site 22.1, *Gillespie et al. 11463* (CAN 10112599); site 22.2, *Gillespie et al. 11485* (CAN 10112592); site 23.8, *Gillespie et al. 11523* (CAN 10112593); site 23.10, *Gillespie et al. 11534* (CAN 10112579); site AT-5, *Röthlisberger s.n.* (CAN 10020831) • Clark Fiord: site 20.1, *Gillespie et al. 12332* (CAN 10112587);

**Figure 14. A–C.** *Carex bigelowii* subsp. *bigelowii*. **A.** Habitat. *Gillespie et al. 12352a*. **B.** Habit. *Gillespie et al. 11578*. **C.** Inflorescence. *Gillespie et al. 11922*. **D–F.** *Carex capillaris* subsp. *fuscidula*. **D.** Habit. **E.** Staminate spike. **F.** Pistillate spikes. *Gillespie et al. 11923*. Photos by P.C. Sokoloff.

site 20.2, *Gillespie et al. 12352a* (CAN 10112594) • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11816* (CAN 10112595); site 8.2, *Gillespie et al. 11922* (CAN 10112584) • Kangiqtualuk Uqquqti: site 1.1, *Gillespie et al. 11779* (CAN 10112598) • Kuugaaluk: site 16.2, *Gillespie et al. 12201* (CAN 10112597); site 19.2, *Gillespie et al. 12294* (CAN 10112591); site A22.3, *Gillespie et al. 12461* (CAN 10112596) • Refuge Harbour: site 11.1, *Gillespie et al. 12007* (CAN 10112583) • Stewart Valley: site 15.1, *Gillespie et al. 12095* (CAN 10112582), *Gillespie et al. 12096* (CAN 10112586) • Tasialuk N: site 26.1, *Gillespie et al. 11578* (CAN 10112588); site 26.2, *Gillespie et al. 11580* (CAN 10112580) • Tasialuk S: site 26.5, *Gillespie et al. 11600* (CAN 10112585) • Tingijattut: site TG-2, *Dare et al. 78* (CAN 10092307); site 15.2, *Gillespie et al. 12136* (CAN 10112581); site 15.6, *Gillespie et al. 12169* (CAN 10112589).

**Identification.** Erect sedges about 20 cm tall; rhizome short, brown. Inflorescence of 1 erect, terminal staminate spike, with 2–3 erect, sessile, pistillate spikes clustered just below. Pistillate scales blackish brown with central green stripe. Perigynia green; stigmas 2.

This variable species is similar to *C. aquatilis* subsp. *stans*, but has much shorter bracts (shorter than the inflorescence).

**Habitat.** Dry to moist tundra.

**Notes.** This is one of the most common *Carex* species in Agguttinni TP and can be found in many habitats across the park.

***Carex capillaris* L. subsp. *fuscidula* (V.I.Krecz. ex T.V.Egorova) Á.Löve & D.Löve**
Dusky-spike sedge – carex à épis sombres – iviit, ivisuka, ivitsukak (Blondeau et al. 2011)
Figure 14D–F

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 23.10, *Gillespie et al. 11532* (CAN 10112618) • Gibbs Fiord: site 20.9, *Gillespie et al. 12378* (CAN 10114758) • Kangiqtualuk Agguqti: site 3.2, *Gillespie et al. 11821* (CAN 10112614), *Gillespie et al. 11833* (CAN 10112617); site 8.2, *Gillespie et al. 11923* (CAN 10112615); site 21.1, *Gillespie et al. 12411* (CAN 10114759) • Kangiqtualuk Uqquqti: site 27.1, *Gillespie et al. 11619* (CAN 10112612) • Stewart Valley: site 15.1, *Gillespie et al. 12101* (CAN 10112616) • Tasialuk S: site 26.5, *Gillespie et al. 11601* (CAN 10112613) • Tingijattut: site 15.9, *Gillespie et al. 12183* (CAN 10112619).

**Identification.** Cespitose, yellowish green sedges with flowering culms 15–25 cm tall; basal leaves shorter than culms. Inflorescence of 1 terminal staminate spike (sometimes with 1 or more pistillate flowers at the base of the spike), with 2 or more narrow, brown, pistillate spikes dangling on capillary peduncles below. Pistillate scales brown with wide pale hyaline margin around edge. Perigynia yellowish brown, beaked; stigmas 3.

**Habitat.** Moist to wet tundra.

**Notes.** Widespread, but generally uncommon, throughout the Fiord and Mountain zone.

***Carex fuliginosa* Schkuhr subsp. *misandra* (R.Br.) Nyman**
Short-leaved sedge – carex fuligineux – kilirnait (Mallory and Aiken 2012)
Figure 15A

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Dansereau 500723-1079* (MT 00286965), *Dansereau 500723-1079* (MT 00286966); site 23.6, *Gillespie et al. 1151*6 (CAN 10112621) • Barnes Plateau S: site GL-12, *Raynolds & Bültmann MKR-2022-48* (CAN 10169273) • Clark Fiord: site 20.5, *Gillespie et al. 12351* (CAN 10112628) • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11812* (CAN 10112623); site 8.5, *Gillespie et al. 11968* (CAN 10112624) • Kangiqtualuk Uqquqti: site 27.1, *Gillespie et al. 11612* (CAN 10112620) • Niaqurnaaluk-Qassialuit: site 18.2, *Gillespie et al. 12248* (CAN 10112627) • Refuge Harbour: site 11.2, *Gillespie et al. 12025* (CAN 10112625) • Stewart Valley: site 15.1, *Gillespie et al. 12105* (CAN 10112622) • Tingijattut: site 15.2, *Gillespie et al. 12135* (CAN 10112626) • Swiss Bay: site SB-2, *Starr 08-220* (CAN 10036872).

**Identification.** Cespitose, erect sedges with flowering culms to 30 cm tall and shorter folded green leaves commonly curled below. Inflorescence of 1 terminal gynecandrous spikse and 2 or more dangling, dark brown/black pistillate spikes below. Perigynia scales dark brownish black. Perigynia dark brownish black, beaks minutely serrulate; stigmas 3.

This species is similar to *C. atrofusca*, but has deep green, channelled and curled basal leaves, not the flat, glaucous leaves of *C. atrofusca*.

**Habitat.** Dry to wet hummocky tundra.

**Figure 15. A.** *Carex fuliginosa* subsp. *misandra*, habit. *Gillespie et al. 11812*. **B.** *Carex holostoma*, Iinflorescence. *Gillespie et al. 11976*. **C–E.** *Carex marina*. *Gillespie et al. 11965*. **C.** Habitat. **D.** Habit. **E.** Inflorescence. Photos by P.C. Sokoloff (A–B, D–E) and L.J. Gillespie (C).

***Carex holostoma* Drejer**
Arctic marsh sedge – carex à bec entier – iviit, ivisuka, ivitsukak (Blondeau et al. 2011)
Figure 15B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 5.4, *Gillespie et al. 11871* (CAN 10112630); site 8.7, *Gillespie et al. 11976* (CAN 10112629) • Kangiqtualuk Uqquqti: site 28.4, *Gillespie et al. 11664* (CAN 10112631).

**Identification.** Erect, cespitose sedges to 20 cm tall, with green, stiffly erect culms and leaves. Inflorescence of 1 terminal staminate spike in between 2–3 sessile, erect, black, oblong to cylindrical pistillate spikes. Pistillate scales blackish brown with a small pale midvein. Perigynia bicoloured, green, or black; stigmas 3.

**Habitat.** Wet meadows, wet hummocky tundra, and pond edges.

**Notes.** These collections, along with an unconfirmed collection from the west coast of Baffin Island, are the northernmost known records of this Low Arctic species in both Canada and North America.

***Carex marina* Dewey**
Sea sedge – carex marin – iviit, ivisuka, ivitsukak (Blondeau et al. 2011)
Figure 15C–E

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.5, *Gillespie et al. 11965* (CAN 10112632).

**Identification.** Erect, cespitose sedges about 20 cm tall with pale green culms and leaves. Inflorescence

of 2–3 sessile, erect, bisexual spikes closely clustered at the tip of the culm. Spikes gynecandrous, with pistillate flowers clustered at the tip and staminate flowers below. Perigynia scales red-brown with white hyaline margin and wide green midvein. Perigynia brownish green; stigmas 2.

**Habitat.** Moist to wet tundra.

**Notes.** This species was only recorded once for the park, on the turfy edges of a pond in the large valley at the head of Kangiqtualuk Agguqti. This collection is the first record for this Arctic species on northeastern Baffin Island.

***Carex maritima* Gunnerus**
Seaside sedge – carex maritime – iviit, ivisuka, ivitsukak (Blondeau et al. 2011)
Figure 16A

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.1, *Gillespie et al. 11902* (CAN 10112633) • Kangiqtualuk Uqquqti: site 30.5, *Gillespie et al. 11724* (CAN 10112635); site 1.2, *Gillespie et al. 11781a* (CAN 10112634) • Tasialuk S: site 21.12, *Gillespie et al. 12439* (CAN 10112636).

**Identification.** Creeping sedges with long rhizomes and short (to 5 cm long) culms barely longer than the leaves, often laying flat on the ground. Inflorescence a compact head of spikes (appearing to be a single spike), each spike androgynous with male flowers at the top and several female flowers below. Pistillate scales erect, tan to dark brown. Perigynia large, tan to brown; stigmas 2.

**Habitat.** Wet or dry seashore, sand or stony-sand beaches.

**Notes.** This characteristically coastal species can also be found inland where sandy conditions are similar

**Figure 16. A.** *Carex maritima*, habit. *Gillespie et al. 11902*. **B.** *Carex membranacea*, habit. *Gillespie et al. 11814*. **C–D.** *Carex myosuroides*. **C.** Habit. *Gillespie et al. 11982*. **D.** Inflorescences. *Gillespie et al. 11686*. Photos by L.J. Gillespie (A) and P.C. Sokoloff (B–D).

to its preferred beach habitat, where the substrate allows for the growth of long, creeping rhizomes. In the park it was found only in sheltered valleys in the Fiord and Mountain zone, on sand deltas, coastal stony-sand terraces, and inland on sand slopes and sandy pond margins.

***Carex membranacea* Hook.**
Fragile sedge – carex membraneux – kilirnit ajjkasangir iviit (Mallory and Aiken 2012); iviit, ivisuka (Blondeau et al. 2011)
Figure 16B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Dansereau 500723-1078* (MT 00286927); site 22.2, *Gillespie et al. 11491* (CAN 10112638); site 24.2, *Gillespie et al. 11547* (CAN 10112639) • Gibbs Fiord: site 20.10, *Gillespie et al. 12388* (CAN 10114729) • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11814* (CAN 10114724); site 8.2, *Gillespie et al. 11924* (CAN 10112640) • Kangiqtualuk Uqquqti: site 28.1, *Gillespie et al. 11637* (CAN 10112637) • Kuugaaluk: site 19.1, *Gillespie et al. 12291* (CAN 10114727) • Refuge Harbour: site 12.7, *Gillespie et al. 12054* (CAN 10114725) • Tasialuk N: site 26.4, *Gillespie et al. 11583* (CAN 10114728) • Tingijattut: site 15.2, *Gillespie et al. 12143* (CAN 10114726).

**Identification.** Erect, rhizomatous sedges with culms to 40 cm tall. Leaves broad, flat, mostly basal with dead marcescent leaves from previous years. Inflorescence of 1–3 erect terminal staminate spikes with 1 to several erect, brownish-black, sessile pistillate spikes below. Pistillate scales dark brown to black. Perigyna glossy black, inflated and membranaceous; stigmas (2)3.

This species grows in the same habitat as *Carex aquatilis* subsp. *stans*, and young individuals can be difficult to distinguish from each other; however, the fruits and scales of *Carex membranacea* are often darker when mature and generally are inflated.

**Habitat.** Wet meadows, wet hummocky tundra, and pond edges.

***Carex myosuroides* Vill.**
Syn.: *Kobresia myosuroides* (Vill.) Fiori
Mouse-tail bog sedge – carex queue-de-souris – iviit, ivisuka, ivitsukak (Blondeau et al. 2011)
Figure 16C, D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Dansereau 500725-0464* (MT 00202111), *Dansereau 500725-0464* (MT 00202127); site 23.10, *Gillespie et al. 11533* (CAN 10114730) • Clark Fiord: site 20.1, *Gillespie et al. 12333* (CAN 10114737) • Kangiqtualuk Agguqti: site 3.5, *Gillespie et al. 11850* (CAN 10114732); site 8.2, *Gillespie et al. 11928* (CAN 10114733) • Kangiqtualuk Uqquqti: site 29.2, *Gillespie et al. 11686* (CAN 10114731) • Kuugaaluk: site 19.4, *Gillespie et al. 12302* (CAN 10114736) • Refuge Harbour: site 12.6, *Gillespie et al. 12053* (CAN 10114734) • Stewart Valley: site 15.1, *Gillespie et al. 12099* (CAN 10114735).

**Identification.** Cespitose erect sedges with culms and basal leaves 10–20 cm tall. Basal leaves thin and needle like, forming distinct tufts. Inflorescence terminal, linear, consisting of multiple small, sessile, 2-flowered bisexual spikelets. Achene covered by thin, brownish, membrane-like sheath; stigmas 3.

This densely cespitose sedge grows in the same habitat as the superficially similar *Carex nardina*. It can be differentiated from that species by its thin, linear inflorescence of multiple small spikelets (versus single ovoid spike in *C. nardina*), and the fruit covered by a membrane-like sheath (versus fully enclosed in a perigynium in *C. nardina*).

**Habitat.** Dry tundra, well drained, rocky gravelly places, windswept ridges and calcareous areas.

**Notes.** *Carex myosuroides* was previously included in the genus *Kobresia*.

***Carex nardina* Fr.**

Nard sedge – carex nard – iviit, ivisuka, ivitsukak (Blondeau et al. 2011)

Figure 17A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-2, *Dansereau 5007250466* (MT 00106399); site 23.6, *Gillespie et al. 11517* (CAN 10114738) • Clark Fiord: site 20.1, *Gillespie et al. 12336* (CAN 10114746) • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11802* (CAN 10114740); site 8.4, *Gillespie et al. 12003* (CAN 10114741); site 21.2, *Gillespie et al. 12417* (CAN 10114747) • Kangiqtualuk Uqquqti: site 28.1, *Gillespie et al. 11643* (CAN 10114739) • Kuugaaluk: site 19.4, *Gillespie et al. 12306* (CAN 10114745) • Refuge Harbour: site 12.2, *Gillespie et al. 12040* (CAN 10114742) • Stewart Valley: site 15.1, *Gillespie et al. 12103* (CAN 10114743) • Swiss Bay: site SB-2, *Starr 08-226* (CAN 10038166) • Tingijattut: site 15.3, *Gillespie et al. 12147* (CAN 10114744).

**Identification.** Cespitose erect sedges with culms and basal leaves 10–20 cm tall. Basal leaves thin and

**Figure 17. A–B.** *Carex nardina*. **A.** Habit. **B.** Inflorescence. *Gillespie et al. 12003*. **C–D.** *Carex rupestris*. **C.** Habit. **D.** Inflorescence. *Gillespie et al. 11849*. Photos by P.C. Sokoloff.

needle like, forming distinct tufts, with dead marcescent leaves from previous years persisting. Inflorescence of 1 terminal, ovoid, androgynous spike (staminate flowers above and pistillate flowers below). Pistillate scales brown with raised, sometimes paler midvein. Perigynia green, often with brown tips; stigmas 2.

For a comparison with the similar *C. myosuroides*, see that species.

**Habitat.** Dry tundra and well drained, rocky gravelly places.

***Carex rupestris* All.**
Rock sedge – carex des rochers – iviit, ivisuka, ivitsukak (Blondeau et al. 2011)
Figure 17C, D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Gibbs Fiord: site 20.9, *Gillespie et al. 12375* (CAN 10114751) • Kangiqtualuk Agguqti: site 3.5, *Gillespie et al. 11849* (CAN 10114753); site 8.2, *Gillespie et al. 11927* (CAN 10114749) • Kangiqtualuk Uqquqti: site 27.1, *Gillespie et al. 11618* (CAN 10114752) • Stewart Valley: site 15.1, *Gillespie et al. 12100* (CAN 10114750) • Tasialuk S: site 26.5, *Gillespie et al. 11595* (CAN 10114748).

**Identification.** Loosely tufted, rhizomatous sedges; rhizomes brownish-black. Flowering culms 15–20 cm tall. Basal leaves subequal to culms, channeled, curling in age; leaves from previous years marcescent. Inflorescence of 1 linear, androgynous spike (staminate flowers above and pistillate flowers below). Pistillate scales deep brown. Perigynia deep brown; stigmas 3.

This species may be mistaken for *Carex supina* subsp. *spaniocarpa*, but can be distinguished based on its darker brown, narrower, solitary terminal spike (versus reddish-brown terminal cluster of spikes in *C. supina* subsp. *spaniocarpa*).

**Habitat.** Dry tundra and well drained, rocky gravelly places.

**Figure 18. A–C.** *Carex scirpoidea* subsp. *scirpoidea*. **A.** Pistillate plant, habit. *Gillespie et al. 11832*. **B.** Staminate spikes. *Gillespie et al. 11917*. **C.** Pistillate spikes. *Gillespie et al. 11930*. **D.** *Carex simpliciuscula* subsp. *subholarctica*, habit. *Gillespie et al. 11915*. Photo by P.C. Sokoloff.

***Carex scirpoidea* Michx. subsp. *scirpoidea***
Single-spike sedge – carex faux-scirpe – iviit, ivisuka, ivitsukak (Blondeau et al. 2011)
Figure 18A–C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 3.2, *Gillespie et al. 11832* (CAN 10114763); site 8.2, *Gillespie et al. 11915* (CAN 10114766), *Gillespie et al. 11917* (CAN 10114761), *Gillespie et al. 11930* (CAN 10114762) • Kangiqtualuk Uqquqti: site 27.1, *Gillespie et al. 11613* (CAN 10114764), *Gillespie et al. 11614* (CAN 10114760).

**Identification.** Erect, cespitose sedges; rhizomes short, stout, dark. Basal leaves flat, sometimes loosely channelled, equalling or exceeding the flowering culms. Inflorescence 1 unisexual spike (plants dioecious). Staminate flowers with a long, exserted anther when fertile. Pistillate scales brownish black. Perigynia brownish-black, hairy; stigmas usually 3.

This species can be differentiated from all other *Carex* species in the park by its dioecious plants with male and female flowers on separate plants; all other *Carex* species are monoecious with both staminate and pistillate flowers on the same plant and inflorescence.

**Habitat.** Dry to moist tundra and well drained, rocky gravelly places.

***Carex simpliciuscula* Wahlenb. subsp. *subholarctica* (T.V.Egorova) Saarela**
Syn.: *Kobresia simpliciuscula* Wahlenb. subsp. *subholarctica* T.V.Egorova
Simple bog sedge – carex simple – iviit, ivisuka, ivitsukak (Blondeau et al. 2011)
Figure 18D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.2, *Gillespie et al.*

*11915* (CAN 10114766); site 8.5, *Gillespie et al. 11966* (CAN 10114768) • Kangiqtualuk Uqquqti: site 28.1, *Gillespie et al. 11636* (CAN 10114765); site 1.2, *Gillespie et al. 11781b* (CAN 10114767).

**Identification.** Tufted, fresh green sedges with flowering culms and leaves to 20 cm tall. Basal leaves channelled. Inflorescence 1, terminal, broad, consisting of multiple staminate spikelets above and pistillate spikelets below. Achene covered by an orange-brown sheath-like membranaceous scale; stigmas 3.

Like *Carex myosuroides*, *C. simpliciuscula* subsp. *subholarctica* has a membrane-like sheath instead of an achene fully enclosed in a perigynium, and both were previously included in the genus *Kobresia*. The two species can be differentiated based on their inflorescences (elongate and narrow in *C. myosuroides* versus shorter and broader in *C. simpliciuscula* subsp. *subholarctica*) and habitat (dry for *C. myosuroides* versus usually moist in *C. simpliciuscula* subsp. *subholarctica*).

**Habitat.** Moist to dry turfy tundra and pond edges.

**Notes.** This species was rarely collected in the park.

***Carex supina* Willd. ex Wahlenb. subsp. *spaniocarpa* (Steud.) Hultén**
Weak Arctic sedge – carex prostré du Groenland
Figure 19A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Clark Fiord: site 20.1, *Gillespie et al. 12326* (CAN 10114773) • Kangiqtualuk Agguqti: site 6.5, *Gillespie et al. 11893* (CAN 10114772); site 8.9, *Gillespie et al. 11986* (CAN 10114770) • Kangiqtualuk Uqquqti: site 30.3, *Gillespie et al. 11720* (CAN 10114769) • Tasialuk S: site 26.5, *Gillespie et al. 11594* (CAN 10114771).

**Identification.** Loosely tufted, rhizomatous sedges; rhizomes whitish brown. Flowering culms to 15 cm tall;

**Figure 19. A–B.** *Carex supina* subsp. *spaniocarpa*. **A.** Habit. **B.** Inflorescence. *Gillespie et al. 12326*. **C–E.** *Carex ursina*. **C.** Habitat. **D.** Habit. **E.** Inflorescence. *Gillespie et al. 12237*. Photos by P.C. Sokoloff.

leaves equaling or shorter than culms. Basal leaves thin, sometimes loosely channeled, sometimes curling, with dead marcescent leaves from previous years. Inflorescence of 2 or 3 small spikes, terminal 1 erect and staminate with few-flowered sessile pistillate spikes below. Pistillate scales reddish-brown with a wide hyaline margin. Perigynia reddish-brown, prominently beaked; stigmas 3.

This species may be mistaken for *Carex rupestris*, but has wider, reddish-brown terminal spikes.

**Habitat.** Dry to moist tundra and well drained, rocky gravelly places.

**Notes.** In Agguttinni TP this species is near the northern limit of its range in Canada and North America.

***Carex ursina* Dewey**
Bear sedge – carex des ours – iviit, ivisuka, ivitsukak (Blondeau et al. 2011)
Figure 19C–E

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Niaqurnaaluk-Qassialuit: site 18.1, *Gillespie et al. 12237* (CAN 10114774).

**Identification.** Densely cespitose sedges with short (to 5 cm), prostrate to ascending flowering culms. Basal leaves frequently longer than the flowering culms. Inflorescence 1 terminal gynecandrous spike (with a cluster of pistillate flowers above and a few staminate flowers below). Pistillate scales brown, often with a paler midvein. Perigynia green; stigmas 2.

**Habitat.** Seashores, lagoon shores, in sheltered sites.

**Notes.** This characteristically turf-forming seashore species was only found in a single location in the park, growing in a moist, densely vegetated depression on a rocky shoreline just above high tide (Figure 19C).

***Eriophorum angustifolium* Honck.**
Narrow-leaved cottongrass – linaigrette à feuilles étroites – kanguujaq (Davis and Banack 2012); pualunnguat (Burt et al. 2010); puallunnguat (Mallory and Aiken 2012); suputaujaq, suputik, suputisaq (Blondeau et al. 2011)
Figure 20A

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.1, *Gillespie et al. 11465* (CAN 10114776) • Clark Fiord: site 20.2, *Gillespie et al. 12354* (CAN 10114780) • Kangiqtualuk Agguqti: site 3.2, *Gillespie et al. 11817* (CAN 10114775) • Stewart Valley: site 15.1, *Gillespie et al. 12106* (CAN 10114778) • Tingijattut: site 15., *Gillespie et al. 12144* (CAN 10114779).

**Identification.** Erect, rhizomatous plants with thick rhizomes. Flowering stems stout, 30–40 cm high; leaves long, wide, dark green. Inflorescence of 3 or more ovoid to subglobose spikes covered in long silky white hairlike bristles, the topmost spike erect, the lower ones dangling; peduncles smooth.

This species and *Eriophorum triste* are closely related and have sometimes been treated as subspecies of the same species. They can be mostly easily distinguished by the smoothness of the stalks connecting the dangling spikes to the main stem: smooth in *E. angustifolium*, covered with short, clear barbs (scabers) in *E. triste*. They often differ in habitat, with *E. angustifolium* growing in wetter areas than *E. triste*.

**Habitat.** wet meadows, pond edges.

**Inuit Qaujimajatuqangit.** The long silky hairs of the fruiting heads of *E. angustifolium* and *E. scheuchzeri* have long been used as a wick for oil lamps (the qulliq) in Nunavut (Burt et al. 2010; Davis and Banack 2012; Mallory and Aiken 2012). In Nunavik *Eriophorum* spp. are also reported to be used as padding and dressings, to bandage the navel of newborns (fruiting heads), as a medicine against warts (stem sap), and as a firestarter (Blondeau et al. 2011; Clark 2012).

***Eriophorum brachyantherum* Trautv. & C.A.Mey.**
Closed-sheathed cottongrass – linaigrette à anthères courtes – suputaujaq (Blondeau et al. 2011)
Figure 20B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 21.10, *Gillespie et al. 12436* (CAN 10114781).

**Identification.** Hummock-forming, densely cespitose plants. Flowering stems 20–45 cm high, with leaf sheath inflated and below the middle of the stem. Basal leaves forming dense tussock of thin, in-rolled, thick leaves generally shorter than the flowering stems, with dead leaves from previous years building up at the base. Inflorescence of 1 thick, ovoid tufted spike with white to pale tan hairlike bristles, subtended by rows of dark grey or black scales.

This species is similar to *E. callitrix* and may be differentiated by flowering stem height (20–45 cm versus 10–15 cm in *E. callitrix*) and the leaf sheath below the middle of the stem and inflated (versus above the middle and generally not inflated in *E. callitrix*).

**Figure 20. A.** *Eriophorum angustifolium*, habitat, head of Kangiqtualuk Agguqti, August 6, 2021. **B.** *Eriophorum brachyantherum*, habit, Victoria Island, Northwest Territories, 18 July 2010. **C.** *Eriophorum callitrix*, inflorescence, *Gillespie et al. 11975*. **D.** *Eriophorum russeolum* subsp. *albidum*, habit. *Gillespie et al. 12356*. Photos by L.J. Gillespie (A), J.M. Saarela (B) and P.C. Sokoloff (C–D).

**Habitat.** Wet meadows and hummocks, pond edges and moist areas.

**Notes.** *Eriophorum brachyantherum* is uncommon on the Canadian Arctic Islands and is known from only five other collections on Baffin Island.

**Inuit Qaujimajatuqangit.** For uses of *Eriophorum* spp. see *Eriophorum angustifolium*.

***Eriophorum callitrix* Cham.**
Beautiful cottongrass – linaigrette à belle crinière – suputaujaq (Blondeau et al. 2011)
Figure 20C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.7, *Gillespie et al. 11975* (CAN 10114783) • Kangiqtualuk Uqquqti: site 28.7, *Gillespie et al. 11679* (CAN 10114782); site 1.2, *Gillespie et al. 11782* (CAN 10114784).

**Identification.** Hummock-forming, densely cespitose plants. Flowering stems 10–15 cm high, with leaf sheath above the middle and generally not inflated. Basal leaves forming dense tussock of thin, in-rolled, leaves generally shorter than flowering stems, with dead leaves from previous years at base. Inflorescence of 1 thick, ovoid tufted spike with white to pale tan hairlike bristles, subtended by rows of dark grey or black scales.

This species may be distinguished from *E. brachyantherum* by its smaller size and leaf sheath above the middle of the flowering stem and generally not inflated.

**Habitat.** Wet meadows and hummocks, pond edges and moist areas.

**Inuit Qaujimajatuqangit.** For uses of *Eriophorum* spp. see *Eriophorum angustifolium*.

***Eriophorum russeolum* Fr. subsp. *albidum* Väre**
Smooth-fruited russet cottongrass – linaigrette à fruits glabres – suputaujaq (Blondeau et al. 2011)
Figure 20D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Clark Fiord: site 20.2, *Gillespie et al. 12356* (CAN 10114785).

**Identification.** Rhizomatous plants 20–30 cm tall, with thin erect stems, narrow green leaves, and thin rhizomes. Inflorescence of 1 subglobose spike covered in long, dull, off-white hairlike bristles, subtended by black scales with pale wide margins.

This species can be distinguished from the other single-spiked cottongrasses based on its rhizomatous habit (as opposed to cespitose in *E. brachyantherum* and *E. callitrix*) and the conspicuously wider pale margins on the black scales below the spike (versus a narrow or absent pale margin in *E. scheuchzeri* subsp. *arcticum*).

**Habitat.** Wet meadows, pond edges.

**Notes.** This low Arctic species is rare in the Canadian Arctic Islands, known only from several confirmed localities on Baffin and Banks Islands. In the park it was collected only once, in a wet hummocky sedge meadow in a side valley on the west side of Clark Fiord. This collection is among the northernmost in Canada.

**Inuit Qaujimajatuqangit.** For uses of *Eriophorum* spp. see *Eriophorum angustifolium*.

***Eriophorum scheuchzeri* Hoppe subsp. *arcticum* M.S.Novos.**
Scheuchzer's Arctic cottongrass – linaigrette arctique – kanguujaq (Davis and Banack 2012); kanguujat, kumaksiutinnguat, pualunnguat (Mallory and Aiken 2012); suputaujaq, suputik, suputisaq (Blondeau et al. 2011)
Figure 21A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 24.1, *Gillespie et al. 11543* (CAN 10114793) • Barnes Plateau S: site GL-12, *Raynolds & Bültmann MKR-2022-23* (CAN 10169272) • Kangiqtualuk Agguqti: site 8.4, *Gillespie et al. 11961* (CAN 10114792) • Kuugaaluk: site 16.8, *Gillespie et al. 12225* (CAN 10114788); site 19.4, *Gillespie et al. 12318* (CAN 10114790) • Refuge Harbour: site 12.1, *Gillespie et al. 12042* (CAN 10114787) • Tingijattut: site 15.2. *Gillespie et al. 12145* (CAN 10114791).

**Identification.** Rhizomatous plants 20–30 cm tall, with thin erect stems, narrow green leaves, and thin rhizomes. Inflorescence of 1 subglobose spike covered in long, silky, bright white hairlike bristles, subtended by bicoloured scales.

This species can be differentiated from the rarer *E. russeolum* subsp. *albidum* by the scales below the spikes. In *E. scheuchzeri* subsp. *arcticum*, these scales are bicoloured and often pass from black at the base to grey at the tip, sometimes with a paler narrow margin.

**Habitat.** Wet meadows, pond edges.

**Notes.** This is the more common rhizomatous single-spiked cottongrass in the park.

**Inuit Qaujimajatuqangit.** For uses see under *Eriophorum angustifolium*.

**Figure 21. A–B.** *Eriophorum scheuchzeri* subsp. *arcticum*. **A.** Habit. *Gillespie et al. 11543*. **B.** Inflorescences. *Gillespie et al. 12318*. **C.** *Eriophorum triste*, habit. Gillespie et al. 11960. Photos by P.C. Sokoloff.

***Eriophorum triste* (Th.Fr.) Hadač & Á.Löve**
Syn.: *Eriophorum angustifolium* subsp. *triste* (Th.Fr.) Hultén
Tall cottongrass – linaigrette triste
Figure 21C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GL-12, *Raynolds & Bültmann MKR-2022-22* (CAN 10169281) • Kangiqtualuk Agguqti: site 5.1, *Gillespie et al. 11860* (CAN 10114816); site 8.4, *Gillespie et al. 11960* (CAN 10114798); site 21.10, *Gillespie et al. 12435* (CAN 10114795) • Kangiqtualuk Uqquqti: site 28.6, *Gillespie et al. 11673* (CAN 10114796) • Kuugaaluk: site 16.3, *Gillespie et al. 12205* (CAN 10114797) • Refuge Harbour: site 11.1, *Gillespie et al. 12015* (CAN 10114794).

**Identification.** Erect, rhizomatous plants with thick rhizomes. Flowering stems stout, 20–30 cm high; leaves long, wide, dark green. Inflorescence of 3 or more ovoid to subglobose spikes covered in long silky white hairlike bristles, the topmost spike erect, the lower ones dangling; peduncles scabrous.

For a comparison with the similar *E. angustifolium*, see that species.

**Habitat.** moist to wet meadows, tundra, snowbeds.

**Inuit Qaujimajatuqangit.** For uses see under *Eriophorum angustifolium*.

**Juncaceae**

***Juncus biglumis* L.**
Two-glumed rush – jonc à deux glumes – iviit (Blondeau et al. 2011; Mallory and Aiken 2012); ivisuka (Blondeau et al. 2011)
Figure 22A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.3, *Gillespie et al. 11495* (CAN 10114819) • Barnes Plateau S: site GL-15, *Raynolds & Bültmann MKR-2022-59* (CAN 10169261) • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11815* (CAN 10114818); site 8.7, *Gillespie et al. 11973* (CAN 10114824); site 30.1, *Gillespie et al. 11711* (CAN 10114817) • Kuugaaluk: site 16.2, *Gillespie et al. 12203* (CAN 10114822) • Refuge Harbour: site 11.2, *Gillespie et al. 12020* (CAN 10114820) • Stewart Valley: site 15.1, *Gillespie et al. 12104* (CAN 10114821) • Tingijattut: site 15.3, *Gillespie et al. 12149* (CAN 10114823).

**Identification.** Grass-like, loosely cespitose herbs to 10 cm tall, lacking hairs. Inflorescence terminal, partially covered by a brown sheath-like bract that is less than twice as long as the inflorescence. Tepals 6, dark brown. Capsules extending well beyond the tepals; seeds many.

This common species may be distinguished from *J. triglumis* subsp. *albescens*, the other caespitose *Juncus* species in the flora area, by its dark brown tepals and capsules that extend well beyond the tepals.

**Habitat.** Wet meadows, wet hummocky tundra, pond edges, on mud.

**Figure 22. A–B.** *Juncus biglumis*. **A.** Habit. *Gillespie et al. 12149*. **B.** Inflorescence. *Gillespie et al. 11815*. **C.** *Juncus leucochlamys*, inflorescence, *Gillespie et al. 11712*. **D.** *Juncus triglumis* subsp. *albescens*, inflorescence. *Gillespie et al. 11916*. Photos by L.J. Gillespie (A) and P.C. Sokoloff (B– D).

***Juncus leucochlamys* V.J.Zinger ex V.I.Krecz.**
Many-flowered chestnut rush – jonc à capsules pâles – iviit, ivisuka, ivitsukak (Blondeau et al. 2011)
Figure 22C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.5, *Gillespie et al. 11964* (CAN 10114786) • Kangiqtualuk Uqquqti: site 28.5, *Gillespie et al. 11668* (CAN 10114799); site 30.1, *Gillespie et al. 11712* (CAN 10114800).

**Identification.** Grass-like herbs to 20 cm tall, lacking hairs, with thick underground rhizomes. Inflorescence terminal, partially covered by a brown sheath-like bract that is several times longer than the flower cluster. Tepals 6, chestnut brown. Capsules with many seeds.

This species may be distinguished from other *Juncus* species in the flora area by its larger size (to 20 cm tall), rhizomatous habit, and bracts that are several times longer than the inflorescence (versus less than twice as long).

**Habitat.** Wet meadows, wet hummocky tundra, pond edges, on mud.

***Juncus triglumis* L. subsp. *albescens* (Lange) Hultén**
Northern white rush – Jonc blanchâtre – iviit, ivisuka, ivitsukak (Blondeau et al. 2011)
Figure 22D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.2, *Gillespie et al. 11916* (CAN 10114826) • Kangiqtualuk Uqquqti: site 28.5, *Gillespie et al. 11667* (CAN 10114825).

**Identification.** Grass-like, loosely cespitose herbs to 10 cm tall, lacking hairs. Inflorescence terminal, partially covered by a brown sheath-like bract that is less than twice as long as the flower cluster. Tepals 6, pale reddish brown or yellowish. Capsules shorter than or barely extend beyond the tepals; seeds many.

This species may be distinguished from the more common *Juncus biglumis* by its pale reddish brown or yellowish tepals and capsules that are shorter than or barely extend beyond the tepals.

**Habitat.** Wet meadows, wet hummocky tundra, pond edges, on mud.

***Luzula confusa* Lindeb.**
Northern woodrush – luzule trompeuse – malikkaanujaq (Mallory and Aiken 2012); Iviit, Ivisuka (Blondeau et al. 2011)
Figure 23A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.1, *Gillespie et al. 11473* (CAN 10114801); site 24.1, *Gillespie et al. 11542* (CAN 10114802) • Barnes Plateau S: site 31.4, *Gillespie et al. 11751* (CAN 10114803); site GL-11, *Raynolds & Bültmann MKR-2022-20* (CAN 10169269) • Clark Fiord: site 20.1, *Gillespie et al. 12330* (CAN 10114811) • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11803* (CAN 10114804); site 8.2, *Gillespie et al. 11933* (CAN 10114806) • Kangiqtualuk Uqquqti: site 28.6, *Gillespie et al. 11674* (CAN 10114805) • Kuugaaluk: site 16.1, *Gillespie et al. 12192* (CAN 10114810); site A22.2, *Gillespie et al. 12452* (CAN 10114812) • Refuge Harbour: site 11.1, *Gillespie et al. 12006* (CAN 10114807) • Remote Lake: site RL-1, *Philpot et al. s.n.* (COLO 2206407) • Stewart Valley: site 15.1, *Gillespie et al. 12098* (CAN 10114808) • Tingijattut: site TG-2, *Dare et al. 77* (CAN 10092423); site 15.2, *Gillespie et al. 12138* (CAN 10114809).

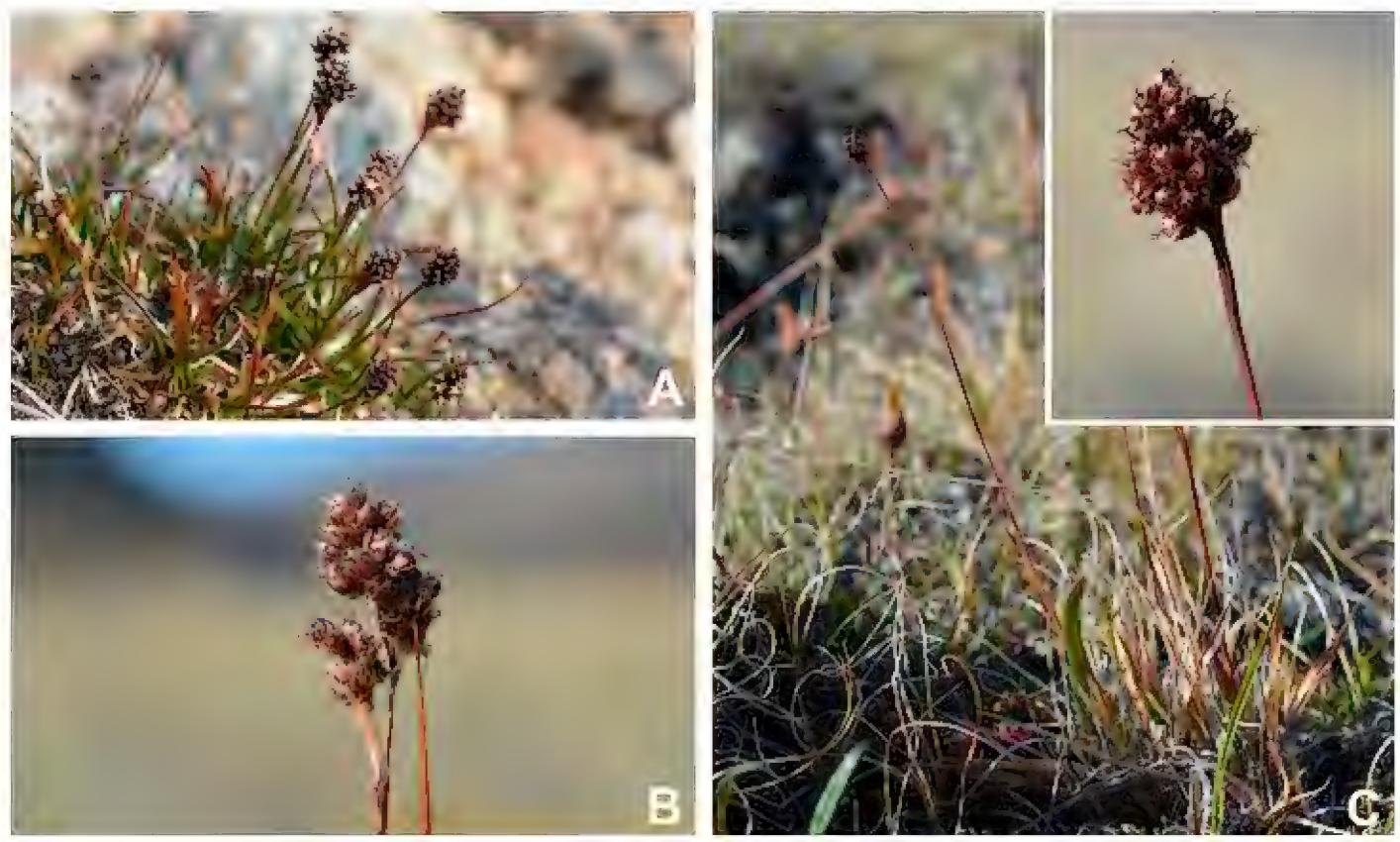


**Figure 23. A–B.** *Luzula confusa*. **A.** Habit. *Gillespie et al. 11751*. **B.** Inflorescence. *Gillespie et al. 12230*. **C.** *Luzula nivalis*, habit, inflorescence (inset). *Gillespie et al. 11934*. Photos by P.C. Sokoloff.

**Identification.** Grass-like herbs to 20 cm tall. Stems and leaves brownish green, sometimes tinged purplish, usually with some soft white hairs; leaves longer, inrolled, pointed. Inflorescence terminal, of 1 to several stalked, dense, flower clusters, each with a small bract. Tepals 6, dark brown. Capsules about equal in length to the tepals, with 3 seeds.

It may be distinguished from *Luzula nivalis* by its longer, in-rolled, pointed leaves, and capsules about the same length as the tepals. *Luzula* differs from *Juncus* in the presence of at least some soft white hairs, capsules with three seeds, and typically dry habitat (versus glabrous, capsules with many seeds, and wet habitat).

**Habitat.** Dry tundra, sometimes moist tundra.

**Notes.** This species is particularly abundant in the park and is found in many different habitats in all three zones (e.g., Figure 2A, B, 6E, 7G, H).

***Luzula nivalis* (Laest.) Spreng.**
Arctic woodrush – luzule arctique
Figure 23C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.1, *Gillespie et al. 11462* (CAN 10114844) • Barnes Plateau S: site GL-10, *Raynolds & Bültmann MKR-2022-21* (CAN 10169270) • Gibbs Fiord: site 20.10, *Gillespie et al. 12387* (CAN 10114840) • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11799* (CAN 10114836); site 8.2, *Gillespie et al. 11932* (CAN 10114839) • Kangiqtualuk Uqquqti: site 28.6, *Gillespie et al. 11675* (CAN 10114838) • Niaqurnaaluk-Qassialuit: site 18.2, *Gillespie et al. 12247* (CAN 10114843) • Refuge Harbour: site 11.3, *Gillespie et al. 12030* (CAN 10114841) • Remote Lake: site RL-1, *Philpot et al. s.n.* (COLO 2207710) • Tingijattut: site 15.2, *Gillespie et al. 12139* (CAN 10114842).

**Identification.** Grass-like herbs to 20 cm tall. Stems and leaves brownish green, sometimes tinged purplish, usually with some soft white hairs; leaves short, flat, blunt-tipped. Inflorescence terminal, of 1 to several stalked, dense, flower clusters, each with a small bract. Tepals 6, dark brown. Capsules longer than the tepals, with 3 seeds.

It may be differentiated from *L. confusa* by its shorter, broader, flat, blunt-tipped leaves and capsules that are longer than the sepals and petals.

**Habitat.** Dry tundra, sometimes moist tundra.

**Notes.** This species is common throughout the park.

**Poaceae**

***Alopecurus borealis* Trin.**
Alpine foxtail – vulpin boréal – ivi (Mallory and Aiken 2012) iviit, ivisuka (Blondeau et al. 2011)
Figure 24

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site 31.5, *Gillespie et al. 11763* (CAN 10114847); site GL-21, *Raynolds & Bültmann MKR-2022-44* (CAN 10169266) • Kuugaaluk: site 16.3, *Gillespie et al. 12204* (CAN 10114848); site 19.4, *Gillespie et al. 12304* (CAN 10114849) • Remote Lake: site RL-1, *Philpot et al. s.n.* (COLO 1420967).

**Figure 24.** *Alopecurus borealis*. **A.** Habitat. **B.** Habit. Barnes Plateau, July 31, 2021. **C.** Inflorescences. *Gillespie et al. 12204*. Photos by L.J. Gillespie.

**Identification.** Rhizomatous grasses. Stems solitary, 10–30 cm tall. Inflorescences very dense, oval, greyish, 1.5–3 cm long, with numerous 1-flowered spikelets. Glumes densely hairy; each floret with a long awn, making inflorescence appear fuzzy or hairy.

**Habitat.** Wet to moist tundra and meadows, lakeshores, ponds, moist sand slopes.

**Notes.** This species was recorded at only five sites in the park. Elsewhere in Canada it is common in the mid to high Arctic. In the park it appears to inhabit colder, exposed sites and is undoubtably more common on the Barnes Plateau than the two collections suggest; the species was also observed in a non-reproductive state along the shoreline of Generator Lake (Figure 7C). At the Barnes Plateau sand hills/valley location, it was a codominant with *Luzula confusa* in a moist to wet mossy meadow, but mostly not reproductive, and was also found partly submerged in a small pond, where it was in full flower (Figure 24A, B). The species was not recorded in the more species-rich Fiord and Mountain zone.

**Inuit Qaujimajatuqangit.** This grass (along with other species) may be used to insulate qarmaqs (sod and skin houses) from drafts (Mallory and Aiken 2012).

***Anthoxanthum monticola* (Bigelow) Veldkamp subsp. *alpinum* (Sw. ex Willd.) Soreng**
Alpine sweetgrass – hiérochloé alpine – ivikutaat (Mallory and Aiken 2012); iviit, ivisuka (Blondeau et al. 2011)
Figure 25

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.1, *Gillespie et al. 11472* (CAN 10114874) • Clark Fiord: site 20.1, *Gillespie et al. 12329* (CAN 10114852) • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11801* (CAN 10114872); site 8.2, *Gillespie et al. 11926* (CAN 10114871) • Kangiqtualuk Uqquqti: site 27.1, *Gillespie et al. 11617* (CAN 10114873) • Kuugaaluk: site A22.3, *Gillespie et al. 12462* (CAN 10114851) • Marble Lake: site 31.1, *Gillespie et al. 11734* (CAN 10114853) • Refuge Harbour: site 11.1, *Gillespie et al. 12010* (CAN 10114870) • Stewart Valley: site 15.1, *Gillespie et al. 12097* (CAN 10114850) • Tingijattut: site 15.2, *Gillespie et al. 12137* (CAN 10114854); site TG-2, *Dare et al. 75* (CAN 10092534), *Dare et al. 76* (CAN 10092531).

**Identification.** Cespitose grasses 20–30 cm tall, yellowish green. Inflorescences oval to narrowly oval, bronze-coloured, 2–4 cm long. Spikelets 3-flowered, the terminal floret bisexual, the lower two staminate, with conspicuous long, bent awns.

**Habitat.** Dry tundra, in rocky and sandy sites.

**Notes.** This is one of the most common grasses in the park and is characteristic of dry tundra. It is also common in dry, exposed, rocky and sandy sites (Figure 4G) in areas where the main vegetation type is moist tundra. On the Barnes Plateau it was found on the Gibbs esker (sight observation, Figure 7D) and ridge at the Marble Lake site (Figure 7F). Plants are fragrant, especially when dried.

***Arctagrostis latifolia* (R.Br.) Griseb. subsp. *latifolia***
Wide-leaved polargrass – arctagrostide à larges feuilles – iviit, ivisuka, ivitsukak (Blondeau et al. 2011)
Figure 26

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Dansereau*

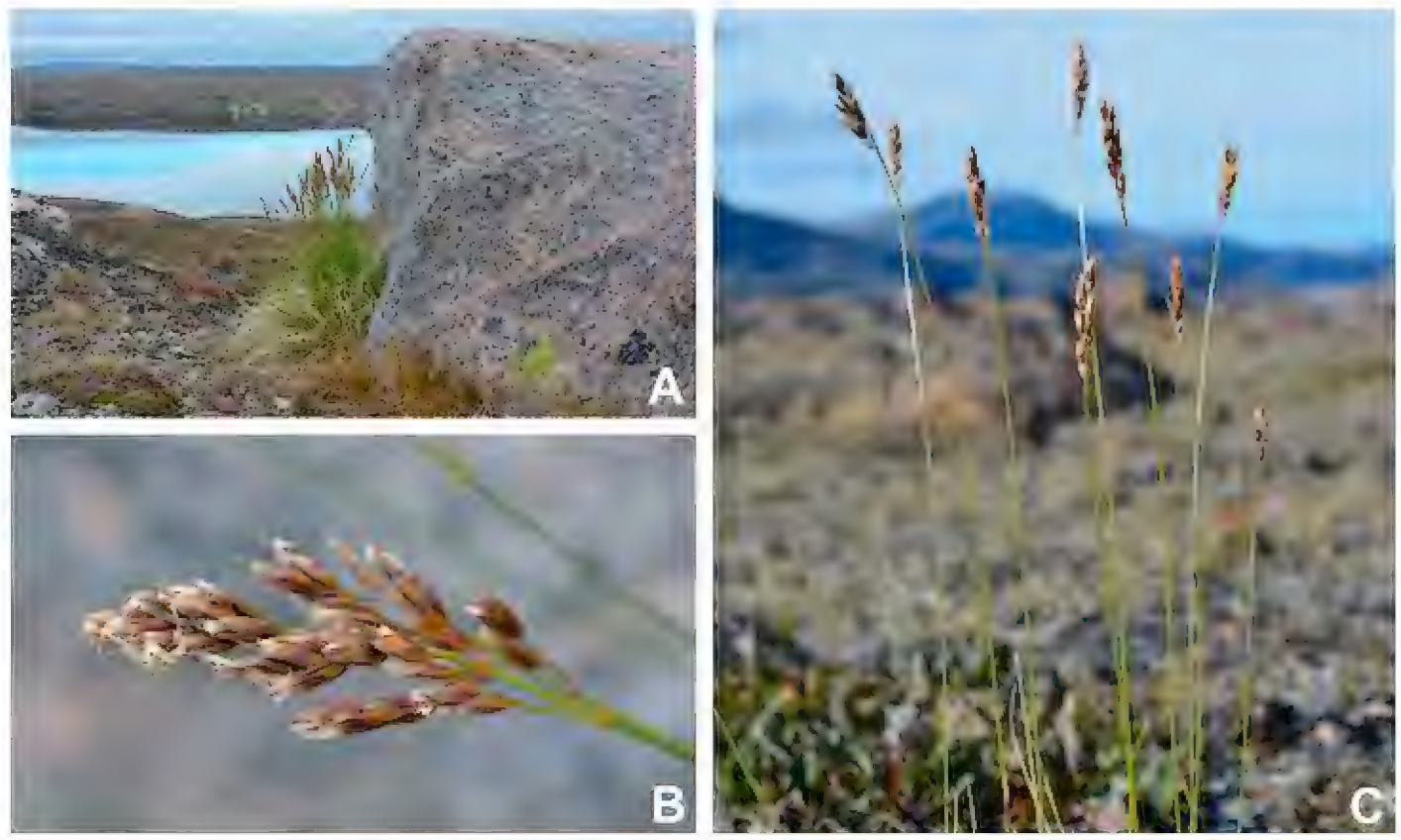


**Figure 25.** *Anthoxanthum monticola* subsp. *alpinum*. **A.** Habitat. **B.** Inflorescence. *Gillespie et al. 11734*. **C.** Habit. *Gillespie et al. 11926*. Photos by P.C. Sokoloff.

**Figure 26.** *Arctagrostis latifolia* subsp. *latifolia*. **A.** Habitat. *Gillespie et al. 12319*. **B.** Habitat and habit. Arviqtujuq Kangiqtua, August 18, 2021. **C.** Inflorescences. *Gillespie et al. 12319*. Photos by P.C. Sokoloff (A, C) and L.J. Gillespie (B).

*500725-0573* (MT 00286551); site 22.1, *Gillespie et al. 11466* (CAN 10114833) • Clark Fiord: site 20.2, *Gillespie et al. 12353* (CAN 10114828) • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11813* (CAN 10114813); site 8.7, *Gillespie et al. 11982* (CAN 10114815) • Kangiqtualuk Uqquqti: site 28.7, *Gillespie et al. 11680* (CAN 10114814) • Kuugaaluk: site 16.2, *Gillespie et al. 12202* (CAN 10114830); site 19.4, *Gillespie et al. 12319* (CAN 10114827) • Refuge Harbour: site 11.1, *Gillespie et al. 12014* (CAN 10114831) • Stewart Valley: site 15.1, *Gillespie et al. 12107* (CAN 10114832) • Tingijattut: site TG-2, *Dare et al. 74* (CAN 10092549); site 15.2, *Gillespie et al. 12146* (CAN 10114829).

**Identification.** Coarse, rhizomatous grasses 20–40 cm tall, with broad, flat leaves. Inflorescences purplish, narrow to open, with many 1-flowered spikelets, awnless.

**Habitat.** Moist tundra, sedge meadows.

**Notes.** This grass is common throughout the Fiord and Mountain zone and was observed at two locations along the Kuugaaluk in the Coastal Lowland zone.

***Calamagrostis purpurascens* R.Br.**
Purple reedgrass – calamagrostide pourpre
Figure 27

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.2, *Gillespie et al. 11934* (CAN 10114755); site 8.6, *Gillespie et al. 11970* (CAN 10114754); site 21.1, *Gillespie et al. 12415* (CAN 10114863).

**Figure 27.** *Calamagrostis purpurascens*. **A.** Habit and habitat. *Gillespie et al. 11970*. **B.** Inflorescence. *Gillespie et al. 12416*. Photos by P.C. Sokoloff.

**Identification.** Coarse cespitose grasses, 20–50 cm tall. Leaves stiff, narrow, rough-margined (with small scabers), and hairy on the upper surface. Inflorescences narrow and dense to somewhat open, with 1-flowered spikelets. Florets with a conspicuous bent awn and a ring of hairs at the base.

**Habitat.** Sandy or stony river terraces.

**Notes.** This species is uncommon in the park and was encountered only in the large, sheltered river valley at the head of Kangiqtualuk Agguqti. On Baffin Island it was previously known from six widely distributed sites; it is reported to prefer calcareous substrates and is much more common in the western low Arctic and boreal zones in Canada.

***Deschampsia cespitosa* (L.) P.Beauv. subsp. *septentrionalis* Chiapella**
Syn.: *D. brevifolia*
Short-leaved hairgrass – deschampsie à feuilles courtes – iviit, ivisuka, ivitsukak (Blondeau et al. 2011)
Figure 28A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kuugaaluk: site 19.4, *Gillespie et al. 12320* (CAN 10114837) • Remote Lake: site RL-1, *Philpot et al. s.n.* (COLO 01451798).

**Identification.** Coarse cespitose grasses to 30 cm tall, with a dense tuft of leaves. Leaves soft, smooth and hairless or with few small hairs, folded to inrolled. Inflorescences narrow and dense, with 2-flowered spikelets. Florets purplish and often bronze-coloured, shiny, with awn same length or only slightly longer than the floret, usually arising near the base to mid-length.

**Habitat.** Wet meadows, wet tundra.

**Figure 28. A–B.** *Deschampsia cespitosa* subsp. *septentrionalis*. **A.** Habit, **B.** Young inflorescence. *Gillespie et al. 12416*. **C–D.** *Deschampsia sukatschewii*. **C.** Habit. **D.** Inflorescence. *Bültmann & Raynolds MKR-2022-33*. Photos by P.C. Sokoloff (A–B) and M. Raynolds (C–D).

**Notes.** This species is rare in the park and has been recorded at only two sites in the Coastal Lowland zone. We found a single small population along a stream at the Kuugaaluk sand hills site. The species was collected previously in 1966 on wet exposed clay near Remote Lake on the Remote Peninsula.

***Deschampsia sukatschewii* (Popl.) Roshev**
Dwarf hairgrass – deschampsie naine – iviit, ivisuka, ivitsukak (Blondeau et al. 2011)
Figure 28C, D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GL-16, *Bültmann & Raynolds MKR-2022-33* (CAN 10169290).

**Identification.** Cespitose grass to 25 cm tall, with a very dense low tuft of leaves. Leaves soft, usually strongly inrolled, smooth and glabrous or with few small hairs. Inflorescences open and pyramidal, with 2-flowered spikelets. Florets purplish, shiny, with awn same length or only slightly longer than floret, arising mid-length or below.

It may be distinguished from *D. cespitosa* subsp. *septentrionalis* by its more open, pyramidal inflorescence, lower, denser tuft of very narrow leaves, and usually fewer flowering culms.

**Habitat.** Wet meadows, wet tundra.

**Notes.** This species is rare in the park, first collected in 2022 and recorded at only one site on the Barnes Plateau. Porsild (1957, 1964) and Porsild and Cody (1980) called this species *Deschampsia pumila* (Griseb.) Ostenf.; the correct name for this species is unclear, and we follow Barkworth (2007) and Elven et al. (2011), who accepted *D. sukatschewii*.

***Dupontia fisheri* R.Br.**
Fisher's tundra grass – dupontie de Fisher – iviit, ivisuka, ivitsukak (Blondeau et al. 2011)
Figure 29

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 24.4, *Gillespie et al. 11552* (CAN 10114845) • Barnes Plateau S: site GL-22, *Raynolds & Bültmann MKR-2022-49* (CAN 10169282) • Kangiqtualuk Agguqti: site 5.5, *Gillespie et al. 11872* (CAN 10114858); site 8.1, *Gillespie et al. 11906* (CAN 10114860); site 8.4, *Gillespie et al. 11959* (CAN 10114857) • Kangiqtualuk Uqquqti: site 1.2, *Gillespie et al. 11780* (CAN 10114846) • Kuugaaluk: site 19.4, *Gillespie et al. 12317* (CAN 10114859) • Tingijattut: site 15.2, *Gillespie et al. 12142* (CAN 10114856).

**Identification.** Rhizomatous grasses 10–30 cm tall. Culms slender. Inflorescences narrow, sometimes with one or two spreading branches. Spikelets purplish, bronze tipped, several-flowered, with glumes longer than the florets; florets awnless or with awn terminal and very short.

**Habitat.** Wet hummocky tundra, wet meadows, pond edges, stream margins.

**Notes.** This grass was sometimes locally common in wet habitats; it was very abundant in a seepage meadow below snowbeds in a small side valley at the Kuugaaluk sand hills site.

**Figure 29.** *Dupontia fisheri*. **A.** Habitat. **B.** Inflorescence. *Gillespie et al. 11959*. Photos by L.J. Gillespie (A) and P.C. Sokoloff (B).

**Figure 30. A.** *Festuca baffinensis*, inflorescence. *Gillespie et al. 11718*. **B–C.** *Festuca brachyphylla* subsp. *brachyphylla*. **B.** Habit. **C.** Inflorescence. *Gillespie et al. 11816*. **D.** *Festuca hyperborea*, habit. *Gillespie et al. 12331*. Photos by P.C Sokoloff.

***Festuca baffinensis* Polunin**
Baffin Island fescue – fétuque de Baffin – iviit, ivisuka, ivitsukak (Blondeau et al. 2011)
Figure 30A

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Uqquqti: site 30.4, *Gillespie et al. 11718* (CAN 10114835).

**Identification.** Densely cespitose grasses 5–20 cm tall. Stems hairy, taller than the short, dense tuft of soft leaves at the base. Inflorescences narrowly ovoid, dense, dark purplish. Spikelets with several florets; florets with straight terminal awn.

*Festuca baffinensis* is easily identified by its hairy stems (versus glabrous stems in the other two *Festuca* species in the park) and more bushy inflorescences.

**Habitat.** Dry tundra, rocky and sandy sites.

**Notes.** We recorded *Festuca baffinensis* only once in the park, on sand-cobble flats along the Sam Ford River.

***Festuca brachyphylla* Schult. & Schult.f. subsp. *brachyphylla***
Short-leaved fescue – fétuque à feuilles courtes – Ivilsugait (Mallory and Aiken 2012); iviit, ivisuka (Blondeau et al. 2011)
Figure 30B, C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.2, *Gillespie et al. 11484* (CAN 10114968); site 24.1, *Gillespie et al. 11541* (CAN 10114969) • Barnes Plateau S: site GL-17, *Raynolds & Bültmann MKR-2022-31* (CAN 10169289) • Clark Fiord: site 20.1, *Gillespie et al. 12331* (CAN 10114978) • Gibbs Fiord: site 20.11, *Gillespie et al. 12391* (CAN 10114966) • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11804* (CAN 10114972); site 8.2, *Gillespie et al. 11929* (CAN 10114973) • Kuugaaluk: site 19.4, *Gillespie et al. 12301* (CAN 10114977) • Stewart Valley: site 15.1, *Gillespie et al. 12102* (CAN 10114975) • Tasialuk N: site 26.1, *Gillespie et al. 11577* (CAN 10114970) • Tingijattut: site TG-2, *Dare et al. 72* (CAN 10092581); site 15.5, *Gillespie et al. 12166* (CAN 10114976).

**Identification.** Densely cespitose grasses 10–20 cm tall. Stems glabrous, usually much taller than the short, dense tuft of leaves at the base; uppermost culm leaf sheath not inflated. Inflorescences dark purple, narrow, dense. Spikelets with several florets; florets with straight awn.

*Festuca brachyphylla* differs from *F. hyperborea* in its erect, usually taller habit and longer uppermost culm leaf with a sheath that is not inflated.

**Habitat.** Dry tundra, rocky and sandy sites.

***Festuca hyperborea* Holmen ex Fred.**
High Arctic fescue – fétuque hyperboréale
Figure 30D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site 31.6, *Gillespie et al. 11765*

(CAN 10114960) • Clark Fiord: site 20.7, *Gillespie et al. 12373* (CAN 10114965) • Kangiqtualuk Agguqti: site 6.3, *Gillespie et al. 11886* (CAN 10114961); site 28.3, *Gillespie et al. 11655* (CAN 10114959); site 29.2, *Gillespie et al. 11688* (CAN 10114971) • Kuugaaluk: site 16.1, *Gillespie et al. 12191* (CAN 10114964); site A22.3, *Gillespie et al. 12463* (CAN 10114967) • Ravenscraig Harbour: site RH-1, *Dare 4* (CAN 10092572), *Dare 19* (CAN 10092573) • Refuge Harbour: site 12.4, *Gillespie et al.* 12045 (CAN 10114962) • Tingijattut: site 15.9, *Gillespie et al. 12184* (CAN 10114963).

**Identification.** Densely cespitose grasses 5–15 cm tall. Stems glabrous, usually much taller than the short, dense tuft of leaves at the base; uppermost culm leaf with a short blade and somewhat inflated sheath. Inflorescences dark purple, narrow, dense. Spikelets with several florets; florets with straight awn.

*Festuca hyperborea* differs from *F. brachyphylla* in its semi-prostrate habit (versus erect), shorter uppermost leaf on the stem with a somewhat inflated sheath (versus not inflated).

**Habitat.** Dry tundra, rocky and sandy sites.

***Koeleria spicata* (L.) Barberá, Quintanar, Soreng & P.M.Peterson**
Syn.: *Trisetum spicatum* (L.) K. Richt.
Spike trisetum – trisète à épi – ivit iviksugait (Mallory and Aiken 2012); iviit, ivisuka (Blondeau et al. 2011)
Figure 31

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Röthlisberger s.n.* (CAN 10021540) • Kuugaaluk: site 19.4, *Gillespie et al. 12305* (CAN 10114862) • Tasialuk S: site 21.12, *Gillespie et al. 12449* (CAN 10114861).

**Identification.** Cespitose grasses 10–30 cm tall with pale bluish or purplish green erect stems. Inflorescences dense, shiny purplish bronze or green, appearing fuzzy due to the long bent and twisted awns.

**Habitat.** Dry tundra, sandy and rocky sites.

**Notes.** We recorded this distinctive grass at only two sites in the park, growing on sand slopes at both sites; a third collection was made at the head of Arviqtujuq Kangiqtua (near Atagulisaktalik) in 1951. This species together with related species of *Trisetum* were recently transferred to the genus *Koeleria* based on molecular phylogenetic evidence (Barberá et al. 2019).

***Leymus mollis* (Trin.) Pilg. subsp. *villosissimus* (Scribn.) Á.Löve & D.Löve**
Syn.: *Elymus arenarius* L. subsp. *mollis* (Trin.) Hultén
Arctic lymegrass – élyme des sables velu – ivit, iviksukat, ivialuit, ivigjuaq (Burt et al. 2010); iviit, ivitsukak, qillimajuit (Blondeau et al. 2011) ; ivik, ivigak, ivitsukaq, ivisuka (Clark 2012)
Figure 32

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.1, *Gillespie et al. 11911* (CAN 10114855).

**Identification.** Coarse, rhizomatous beach grass 0.3–1 m tall, with thick stems and broad flat leaves. Inflorescences pale greenish purple, narrow, spikelike, 8–15 cm long. Spikelets large, several-flowered, covered in soft hairs. Florets awnless.

**Figure 31.** *Koeleria spicata*. **A.** Habitat and habit, on sand banks of Kuugaaluk. **B.** Inflorescences. *Gillespie et al. 12305*. Photos by L.J. Gillespie (A) and P.C. Sokoloff (B).

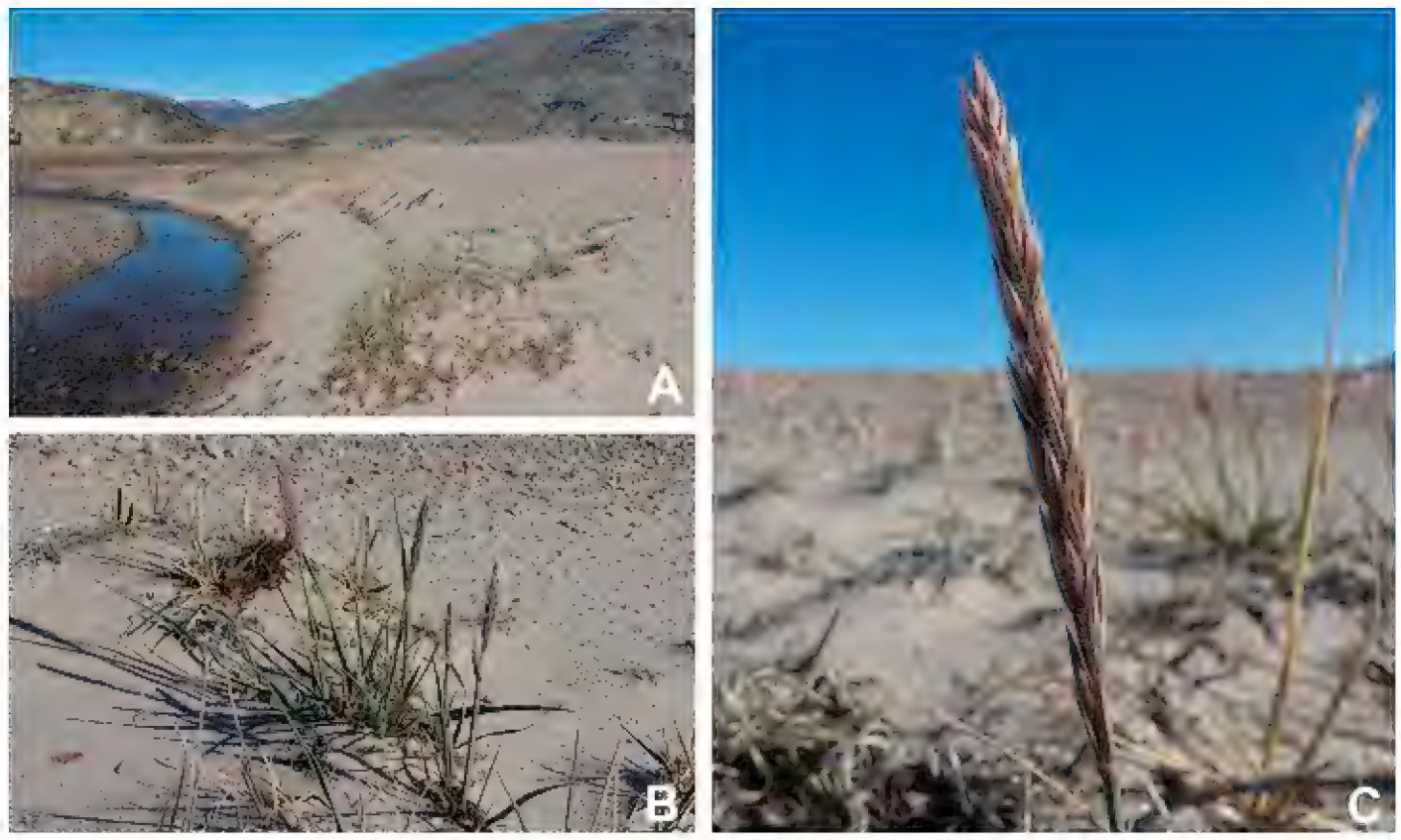


**Figure 32.** *Leymus mollis* subsp. *villosissimus*. **A.** Habitat. **B.** Habit. **C.** Inflorescence. *Gillespie et al. 11911*. Photos by L.J. Gillespie.

**Habitat.** Dry sandy coastal sites.

**Notes.** This is a very common beach and sand dune grass in the Low Arctic; on Baffin Island it is known from widely scattered coastal sites. We recorded only one small population in the park on a low sand bank along a stream near the coast and adjacent to the delta of the large river at the head of Kangiqtualuk Agguqti. Plants observed were only about 30 cm tall, but elsewhere in the Arctic they may grow to 1 m or more.

**Inuit Qaujimajatuqangit.** This species has been used to weave baskets and mats (Ootoova et al. 2001), and the lower part of the stem is eaten (Burt et al. 2010); the same uses are reported in Nunavik (Blondeau et al. 2011). In Nunavik, is it also reported to be used to absorb moisture from hands or boots, as insulation or bedding, in basketry, and to make rope (Blondeau et al. 2011, Clark 2012).

***Phippsia algida* (Sol.) R.Br.**
Icegrass – phippsie arctique – iviit, ivisuka, ivitsukak (Blondeau et al. 2011)
Figure 33

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Arviqtujuq Kangiqtua NW: site 18.3, *Gillespie et al. 12250* (CAN 10114868) • Barnes Plateau S: site 31.4, *Gillespie et al. 11749* (CAN 10114866); site 31.8, *Gillespie et al. 11772* (CAN 10114869); site 31.9, *Gillespie et al. 11774* (CAN 10114867); site GL-16, *Raynolds & Bültmann MKR-2022-32* (CAN 10169262) • Kangiqtualuk Agguqti: site 6.3, *Gillespie et al. 11883* (CAN 10114864) • Kuugaaluk: site 16.8, *Gillespie et al. 12228* (CAN 10114865), site A22.3, *Gillespie et al. 12458* (CAN 10114876) • Ravenscraig Harbour: site 18.6, *Gillespie et al. 12278* (CAN 10114875).

**Identification.** Tiny cespitose grasses 1–5 cm tall, often dull pinkish, with culms flat on the ground or

**Figure 33.** *Phippsia algida*. **A.** Habitat. *Gillespie et al. 12278*. **B.** Inflorescence. **C.** Habit. *Gillespie et al. 11772*. Photos by L.J. Gillespie (A, C) and P.C. Sokoloff (B).

somewhat curved upwards. Inflorescences small, dense, cylindrical, with 1-flowered spikelets.

**Habitat.** Wet seashores, lakeshores, wet bases of snowbanks, on wet sand or moss along river and stream margins.

**Notes.** This tiny grass is found throughout the park in suitable wet, often cold and exposed, habitats, where it can be locally common. At the Barnes Ice Cap site, this species appears to be the first vascular plant to colonize the recently deglaciated zone as it was the only species present, apart from moss, within the first 30 m closest to the ice cap. The species was also the most common vascular plant species on the recently exposed shoreline of Generator Lake, and one of only three species recorded there (Figure 7C).

***Pleuropogon sabinei* R.Br.**
Sabine's semaphoregrass – pleuropogon de Sabine – iviit, ivisuka, ivitsukak (Blondeau et al. 2011)
Figure 34

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.3, *Gillespie et al. 11500* (CAN 10114927); site 24.4, *Gillespie et al. 11551* (CAN 10114925) • Barnes Plateau S: site 31.7, *Gillespie et al. 11776* (CAN 10114926); site GL-22, *Raynolds & Bültmann MKR-2022-62* (CAN 10169287) • Kuugaaluk: site 16.8, *Gillespie et al. 12227* (CAN 10114933).

**Identification.** Rhizomatous grasses, with solitary erect culms 10–20 cm tall. Leaves long, linear, often floating on water. Inflorescences one-sided, with 5–8, horizontal to dangling spikelets, usually widely spaced on stem. Spikelets 1–2 cm long, narrow, purplish, with 5–9 florets.

**Habitat.** Wet meadows, lake and pond margins, often in standing water.

**Notes.** This distinctive grass was rather rare in the park, recorded at only one main locality in each of the three zones.

***Poa abbreviata* R.Br.**
Dwarf bluegrass – pâturin court
Figure 35A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.1, *Gillespie et al. 11899* (CAN 10114892).

**Identification.** Densely cespitose grasses 5–15 cm tall, often forming dense flat to hemispherical tussocks. Culms erect to spreading, barely longer than the leaves. Inflorescences narrow spikes, 1–3 cm long. Spikelets multi-flowered, with glumes shorter than the florets. Florets awnless.

*Poa abbreviata* may be distinguished from *P. hartzii* by its shorter, densely cespitose habit, with flowering stems barely longer than the leaves and shorter inflorescences.

**Habitat.** Dry, stony-sand river terraces and deltas.

**Notes.** *Poa abbreviata* is rare in the park; we found it only at one site, on a terrace above a large delta at the head of Kangiqtualuk Agguqti (Figure 6B). Our collection represents the easternmost record of *P. abbreviata* in Canada.

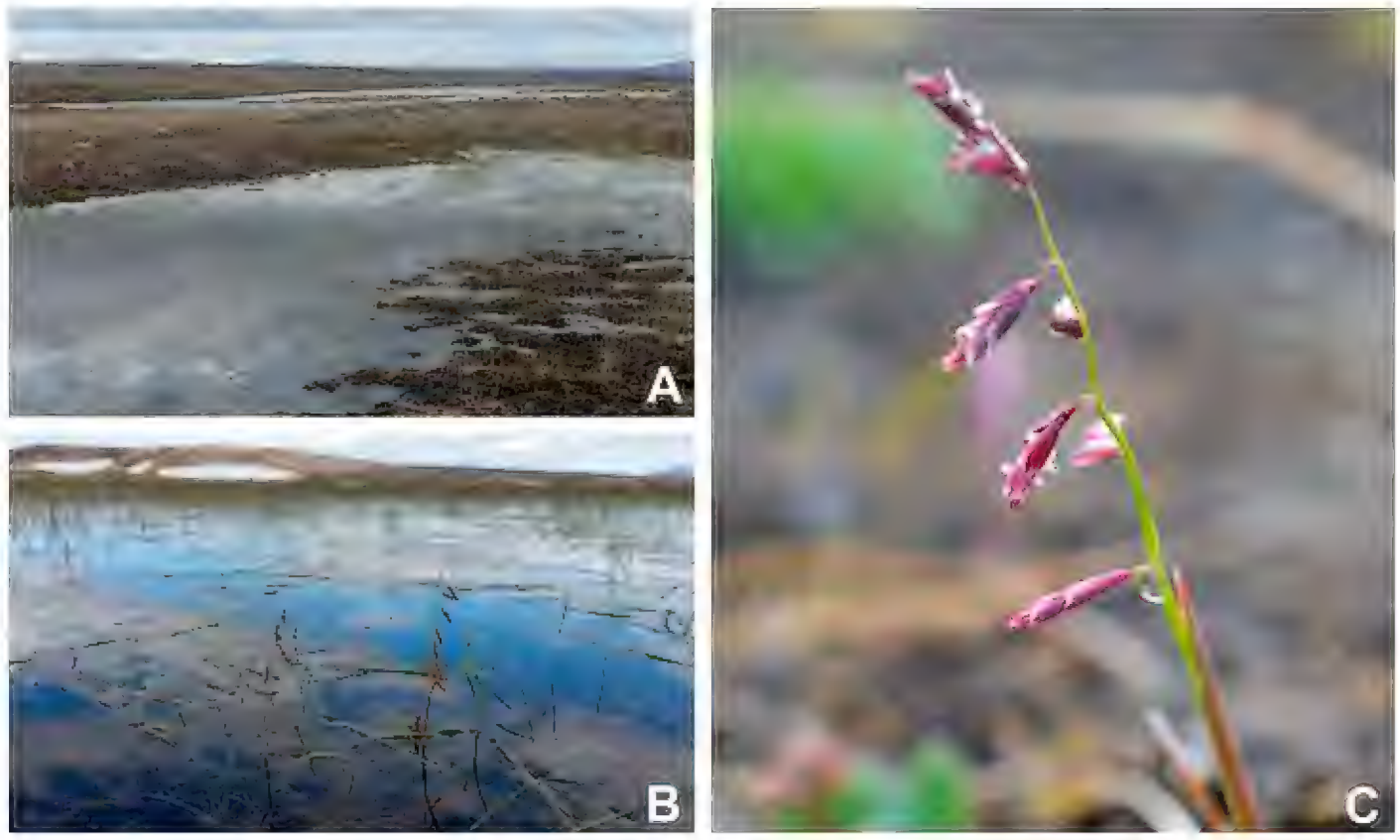


**Figure 34.** *Pleuropogon sabinei*. **A.** Habitat. **B.** Habit. *Gillespie et al. 11776*. **C.** Inflorescence. *Gillespie et al. 12227*. Photos by L.J. Gillespie (A, B) and P.C. Sokoloff (C).

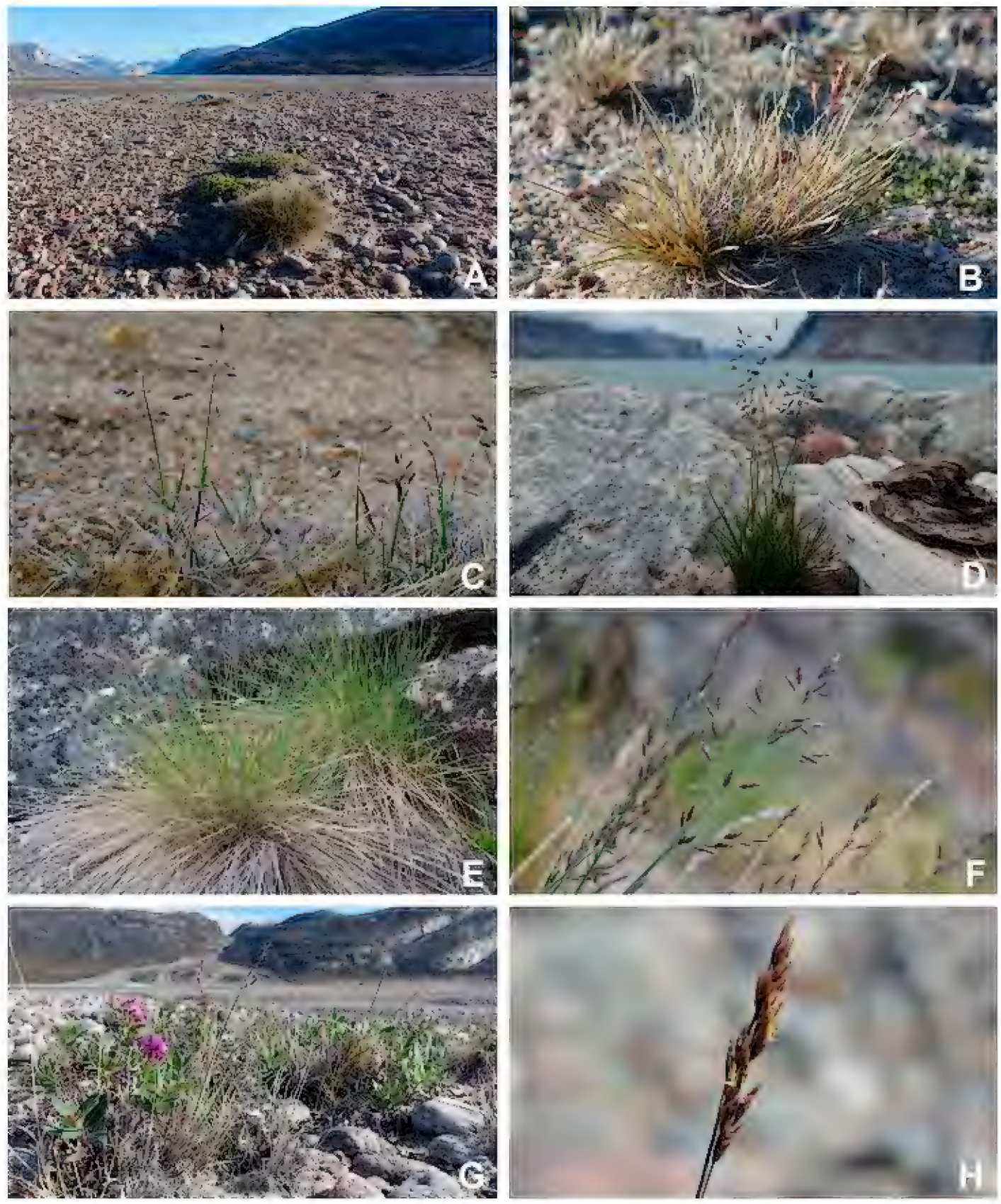


**Figure 35. A–B.** *Poa abbreviata*. **A.** Habitat. **B.** Habit. *Gillespie et al. 11899*. **C.** *Poa arctica* subsp. *arctica*, habit. *Gillespie et al. 11767*. **D.** *Poa arctica* subsp. *caespitans*, habit. *Gillespie et al. 12181*. **E–F.** *Poa glauca* subsp. *glauca*. **E.** Habit. **F.** Inflorescences. *Gillespie et al. 11878*. **G–H.** *Poa hartzii* subsp. *hartzii*. **G.** Habit. **H.** Inflorescence. *Gillespie et al. 11729*. Photos by L.J. Gillespie (A, C–D, G) and P.C. Sokoloff (B, E–F, H).

***Poa arctica* R.Br. subsp. *arctica***

Arctic bluegrass – pâturin arctique – iviit, ivisuka, ivitsuskaka (Mallory and Aiken 2012)

Figure 35C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.3, *Gillespie et al. 11496* (CAN 10114877); site 23.3, *Gillespie et al. 11506* (CAN 10114898) • Barnes Plateau S: site 31.4, *Gillespie et al. 11752* (CAN 10114902); site 31.6, *Gillespie et al. 11767* (CAN 10114900); site GL-14, *Raynolds & Bültmann MKR-2022-27* (CAN 10169256) • Gibbs Esker: site 20.12, *Gillespie et al. 12402* (CAN 10114909) • Gibbs Fiord: site 20.10, *Gillespie et al. 12385* (CAN 10114908) • Kangiqtualuk Agguqti: site 3.2, *Gillespie et al. 11825* (CAN 10114901); site 8.2, *Gillespie et al. 11925* (CAN 10114880) • Kangiqtualuk Uqquqti: site 29.4, *Gillespie et al. 11704* (CAN 10114899) • Kuugaaluk, site 16.1, *Gillespie et al. 12190* (CAN 10114906); site 19.5, *Gillespie et al. 12322* (CAN 10114907); site A22.3, *Gillespie et al. 12460* (CAN 10114910) • Refuge Harbour: site 11.3, *Gillespie et al. 12034* (CAN 10114903) • Stewart Valley: site 15.1, *Gillespie et al. 12121* (CAN 10114905).

**Identification.** Rhizomatous grasses 10–40 cm tall with long rhizomes, usually not turf-forming. Culms erect. Inflorescences triangular, open. Spikelets ovate, multi-flowered. Florets awnless, fertile.

**Habitat.** Moist tundra, moist sandy or rocky sites.

**Notes.** *Poa arctica* subsp. *arctica* is the second most widespread vascular plant species in the park, recorded at 21 of 23 localities surveyed; however, it was rarely dominant and sometimes uncommon. This subspecies is morphologically variable: plants may be short and delicate or tall and coarse, especially in nutrient enriched sites. At the Barnes Ice Cap site, it was rare and formed very low patches.

***Poa arctica* subsp. *caespitans* Simmons ex Nannf.**
High Arctic bluegrass – pâturin cespiteux – iviit, ivisuka, ivitsuskaka (Mallory and Aiken 2012)
Figure 35D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 6.3, *Gillespie et al. 11889* (CAN 10114878) • Tingijattut: site 15.9, *Gillespie et al. 12181* (CAN 10114904).

**Identification.** Rhizomatous grasses 10–40 cm tall, usually not turf-forming, appearing caespitose with very short rhizomes. Culms ascending to erect. Inflorescences triangular, open. Spikelets ovate, multi-flowered. Florets awnless, often sterile.

*P. arctica* subsp. *caespitans* differs from subsp. *arctica* in appearing cespitose, with very short rhizomes (versus obviously rhizomatous, with long rhizomes) and flowers are often, but not always, sterile.

**Habitat.** Moist tundra, moist sandy or rocky sites.

**Notes.** This subspecies of *P. arctica* was much less common in the park than subsp. *arctica*, recorded at only two coastal sites in the Fiord and Mountain zone, on a sandy cobble beach and a stony-sand river bank.

***Poa glauca* Vahl subsp. *glauca***
Glaucous bluegrass – pâturin glauque – Kilirnaujait (Mallory and Aiken 2012); Iviit, Ivisuka (Blondeau et al. 2011)
Figure 35E, F

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GL-18, *Raynolds & Bültmann MKR-2022-34* (CAN 10169258) • Clark Fiord: site 20.1, *Gillespie et al. 12323* (CAN 10114920); *Gillespie et al. 12335* (CAN 10114921) • Gibbs Fiord: site 20.9, *Gillespie et al. 12376* (CAN 10114922), *Gillespie et al. 12383* (CAN 10114923) • Kangiqtualuk Agguqti: site 6.2, *Gillespie et al. 11878* (CAN 10114916); site 8.2, *Gillespie et al. 11939* (CAN 10114917); site 8.6, *Gillespie et al. 11969* (CAN 10114918) • Kangiqtualuk Uqquqti: 29.2, *Gillespie et al. 11687* (CAN 10114915) • Tasialuk S: site 26.5, *Gillespie et al. 11592* (CAN 10114914).

**Identification.** Densely cespitose grasses 10–30 cm tall. Stems stiff, bluish green. Inflorescences narrow, spikelike to moderately open. Spikelets lanceolate, multi-flowered, purplish. Florets awnless.

**Habitat.** Dry tundra, rocky and sandy sites.

**Notes.** This grass typically has a characteristic bluish green colour. It was common in dry sites in the Fiord and Mountain zone but was not seen in the Coastal Lowland zone. It was recorded at two localities on the Barnes Plateau, including on the esker at the Gibbs esker site.

***Poa hartzii* Gand. subsp. *hartzii***
Hartz's bluegrass – pâturin de Hartz
Figure 35G, H

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Uqquqti: site 30.6, *Gillespie et al. 11729* (CAN 10114911, CAN 10114912, CAN 10114913).

**Identification.** Loosely cespitose grasses 15–25 cm tall. Culms erect to speading, much longer than the leaves. Inflorescences narrow spikes, 3–6 cm long. Spikelets lanceolate, multi-flowered, with glumes shorter than the florets. Florets awnless.

**Habitat.** Dry, stony-sand river terraces and deltas.

**Notes.** This species was found only at one site, on slighty elevated areas in the Sam Ford River delta at the head of Kangiqtualuk Uqquqti (Figure 5E). Our collection represents the fourth record of *P. hartzii* on Baffin Island; this mostly High Arctic and western Arctic species was previously recorded from the head of Clyde Inlet (Porsild 1957; Porsild and Cody 1980) and is also known from two collections on northern Baffin Island and adjacent Bylot Island. Only the typical subspecies is found in the Canadian Arctic; the other subspecies are known from Alaska and Russia (Gillespie 2023).

***Puccinellia angustata* (R.Br.) E.L.Rand & Redfield**
Narrow alkaligrass – puccinellie étroite
Figure 36A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.3, *Gillespie et al. 11954* (CAN 10114934) • Kuugaaluk: site 19.4, *Gillespie et al. 12312* (CAN 10114936) • Remote Lake: site RL-1, *Philpot et al. s.n.* (COLO 1530278).

**Identification.** Cespitose grasses 10–30 cm tall. Inflorescences 4–10 cm long, narrow, spikelike, usually

**Figure 36. A–B.** *Puccinellia angustata*. **A.** Habit. Gillespie et al. 12312. **B.** Inflorescence. *Gillespie et al. 11954*. **C.** *Puccinellia bruggemannii*, inflorescence. *Sokoloff & McMullin 693*, Ellesmere Island, Nunavut. **D–E.** *Puccinellia phryganodes* subsp. *neoarctica*. **D.** Habitat. **E.** Habit. *Gillespie et al. 12238*. **F–G.** *Puccinellia tenella* subsp. *langeana*. **F.** Habitat, **G.** Habit. *Gillespie et al. 12185*. Photos by P.C. Sokoloff (A–C) and L.J. Gillespie (D–G).

purplish. Spikelets long, slender, tapered at both ends, with 3–5 flowers and glumes much shorter than the florets. Florets: lemmas 3.5–5 mm long, awnless.

Alkali grasses (*Puccinellia*) and bluegrasses (*Poa*) both have multi-flowered spikelets that lack awns, but they differ in the shape of the spikelet and size of the glumes. Alkali grasses have narrow, elongate spikelets that are tapered at both ends with small glumes that are much shorter than the flowers, whereas bluegrasses have broader, ovate or lanceolate spikelets with larger glumes that are only somewhat or slightly shorter than the flower.

**Habitat.** Moist to dry sandy sites.

**Notes.** *Puccinellia angustata* was recorded at three sites in the park, including on a mostly bare, stony sand depression in *Dryas-Carex* tundra on a river terrace in the large valley at the head of Kangiqtualuk Agguqti and on a steep, mostly bare slope at the Kuugaaluk sand hills site.

***Puccinellia bruggemannii* T.J.Sørensen**
Bruggemann's alkaligrass – puccinellie de Bruggemann
Figure 36C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kuugaaluk: site 16.1, *Gillespie et al. 12193* (CAN 10114935).

**Identification.** Cespitose grasses 10–30 cm tall. Inflorescences 1–4 cm long, narrow, spikelike, usually purplish. Spikelets long, slender, tapered at both ends, with 2–4 flowers and glumes much shorter than the florets. Florets small; lemmas 2.8–3.8 mm long, awnless.

This species may be differentiated from *P. angustata* by its shorter inflorescences and smaller flowers.

**Habitat.** Moist to dry sandy sites.

**Notes.** This species is rare in the park, recorded from only one site, on a sandy flat terrace with 50% vegetation cover at the top of a coastal cliff at the Kuugaaluk mouth locality. This is the first record of this primarily High and western Arctic species from Baffin Island.

***Puccinellia phryganodes* (Trin.) Scribn. & Merr. subsp. *neoarctica* (Á.Löve & D.Löve) Elven**
Creeping alkaligrass – puccinellie rampante – nakiruat (Mallory and Aiken 2012)
Figure 36D, E

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 6.3, *Gillespie et al. 11882* (CAN 10114944) • Kuugaaluk: site 16.5, *Gillespie et al. 12217* (CAN 10114946) • Niaqurnaaluk-Qassialuit: site 18.1, *Gillespie et al. 12230* (CAN 10114947), *Gillespie et al. 12238* (CAN 10114948) • Tingijattut: site 15.9, *Gillespie et al. 12179* (CAN 10114945).

**Identification.** Low-growing, pinkish green grasses with long creeping above-ground stems, often forming extensive mats. Inflorescences narrow with few 3–6-flowered spikelets.

**Habitat.** Seashores, sheltered bays and lagoons, tidal flats.

**Notes.** This very distinctive, pinkish green seashore grass was collected at four coastal sites, two in the Coastal Lowland zone and two in the Fiord and Mountain zone. Plants rarely flower, but spread primarily by creeping stems, which may break off and be carried by ocean currents.

***Puccinellia tenella* (Lange) Holmb. subsp. *langeana* (Berlin) Tzvelev**
Lange's alkaligrass – puccinellie de Lange
Figure 36F, G

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Dansereau 500723-1275* (MT 00286453), *Dansereau 500723-1275* (MT 00286471); site 23.9, *Gillespie et al. 11527* (CAN 10114937) • Kangiqtualuk Agguqti: site 6.3, *Gillespie et al. 11881* (CAN 10114939); site 8.1, *Gillespie et al. 11905* (CAN 10114940); site 30.5, *Gillespie et al. 11722* (CAN 10114938) • Refuge Harbour: site 12.4, *Gillespie et al. 12043* (CAN 10114941) • Tingijattut: site 15.9, *Gillespie et al. 12185* (CAN 10114942), *Gillespie et al. 12186* (CAN 10114943).

**Identification.** Cespitose grasses 3–10 cm tall, with stems prostrate to almost erect. Inflorescences narrow, moderately dense. Spikelets long, slender, tapered at both ends, with 3–6 florets; glumes much shorter than the florets. Florets awnless.

**Habitat.** Sand or stony-sand seashores, wet sites, usually just above the high tide line.

**Notes.** This species was recorded only along seashores in the Fiord and Mountain zone.

**Tofieldiaceae**

***Tofieldia coccinea* Richardson**
Northern tofieldia – tofieldie écarlate
Figure 37A

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 6.1, *Gillespie et al. 11874* (CAN 10114932); site 8.2, *Gillespie et al. 11941* (CAN 10114928) • Kangiqtualuk Uqquqti: site 28.1, *Gillespie et al. 11624* (CAN 10114930) • Refuge Harbour: site 12.8, *Gillespie et al. 12056* (CAN 10114929) • Stewart Valley: site 15.1, *Gillespie et al. 12125* (CAN 10114757) • Tasialuk S: site 26.5, *Gillespie et al. 11596* (CAN 10114931).

**Identification.** Herbs 2–10 cm tall. Leaves flat, sword-like, tapering to a point. Flowering stems dark red. Inflorescences a terminal cluster of small flowers. Floral bracts mostly entire, bracteoles 3-lobed. Flowers pinkish.

The two species of *Tofieldia* found in the park can be distinguished most easily by stem and flower colour: *Tofieldia coccinea* has dark red stems and pinkish flowers, whereas *T. pusilla* has green stems and white or cream flowers.

**Habitat.** Moist to dry rocky tundra.

**Notes.** *Tofieldia coccinea* was found at multiple sites in the Fiord and Mountain zone,

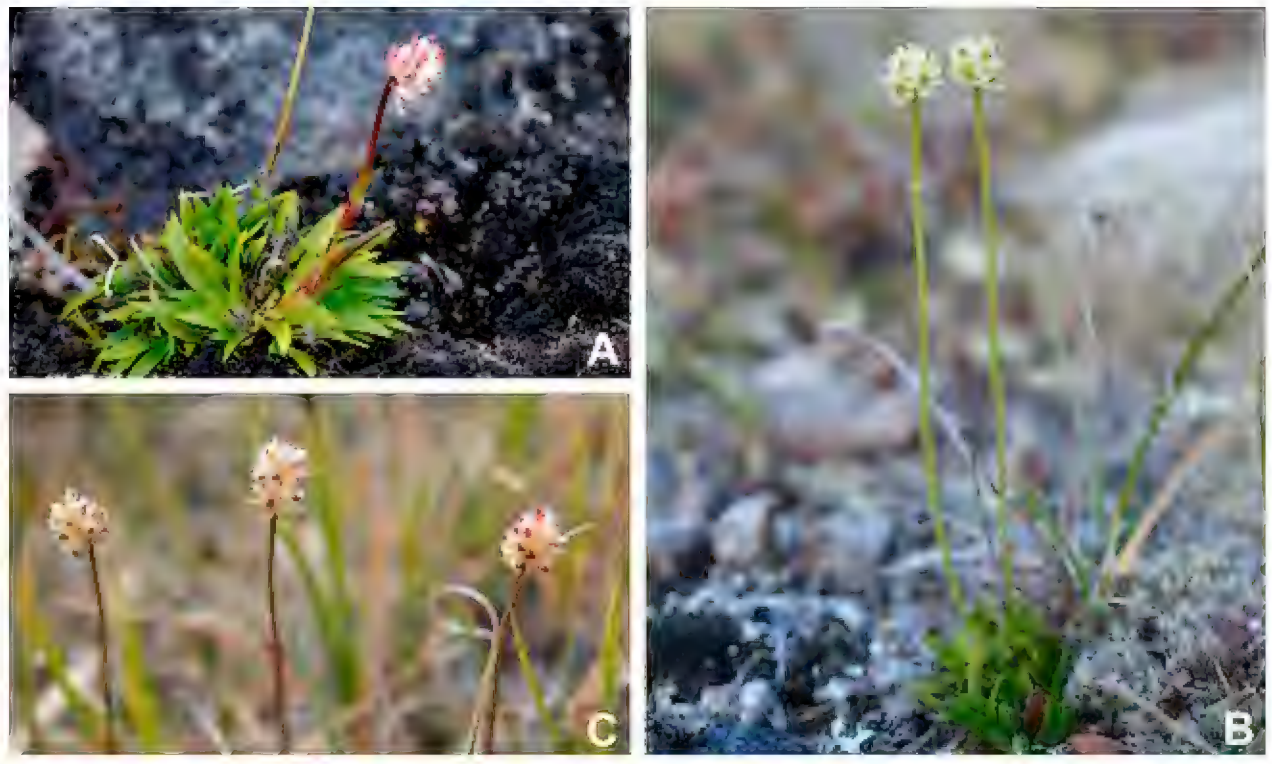


**Figure 37. A.** *Tofieldia coccinea*, habit. *Gillespie et al. 11874*. **B.** *Tofieldia pusilla*, habit. *Gillespie et al. 11623*. **C.** *Tofieldia coccinea* × *T. pusilla*, inflorescences. *Gillespie et al. 11977*. Photos by L.J. Gillespie (A) and P.C. Sokoloff (B, C).

***Tofieldia pusilla* (Michx.) Pers.**
Small tofieldia – tofieldie naine – nunarkuluit katingauqtutqaulluqtait (Mallory and Aiken 2012)
Figure 37B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.2, *Gillespie et al. 11940* (CAN 10114881) • Kangiqtualuk Uqquqti: site 28.1, *Gillespie et al. 11623* (CAN 10114882).

**Identification.** Herbs 2–10 cm tall. Leaves flat, sword-like, tapering to a point. Flowering stems green. Inflorescences a terminal cluster of small flowers. Floral bracts 3-lobed, bracteoles absent. Flowers white or cream.

**Habitat.** Moist hummocky tundra, mossy areas.

**Notes.** *Tofieldia pusilla* was much less common in the park than *T. coccinea*, recorded at only two sites in the large, sheltered valleys at the heads of Kangiqtualuk Agguqti and Kangiqtualuk Uqquqti. Our records of *T. pusilla* are among the northernmost records in the eastern Canadian Arctic (also one record each from Ellesmere Island and northern Baffin Island). We also found hybrid plants, *T. coccinea* × *pusilla*, intermediate between its parents (Figure 37C), at one site (Kangiqtualuk Agguqti: site 8.7, *Gillespie et al. 11977* [CAN 10114883]).

**Inuit Qaujimajatuqangit.** The Inuit name for *Tofieldia pusilla* means "little cluster of flowers that are white or creamy" (Mallory and Aiken 2012).

**Eudicots**
**Asteraceae**

***Antennaria friesiana* (Trautv.) E.Ekman. subsp. *friesiana***
Syn.: *Antennaria ekmaniana* A.E.Porsild
Fries's pussytoes – antennaire de Fries
Figure 38

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 23.10, *Gillespie et al. 11531* (CAN 10114958) • Clark Fiord: site 20.1, *Gillespie et al. 12328* (CAN 10114950) • Gibbs Esker: site 20.12, *Gillespie et al. 12399* (CAN 10114951) • Kangiqtualuk Agguqti: site 3.5, *Gillespie et al. 11851* (CAN 10114957); site 6.3, *Gillespie et al. 11890* (CAN 10114954); site 8.9, *Gillespie et al. 11987* (CAN 10114952) • Kangiqtualuk Uqquqti: site 28.3, *Gillespie et al. 11654* (CAN 10114956) • Kuugaaluk: site 19.3, *Gillespie et al. 12297* (CAN 10114891) • Marble Lake: site 31.1, *Gillespie et al. 11735* (CAN 10114955) • Stewart Valley: site 15.1, *Gillespie et al. 12127* (CAN 10114953) • Tasialuk N: site 26.2, *Gillespie et al. 11579* (CAN 10114890) • Tasialuk S: site 26.5, *Gillespie et al. 11590* (CAN 10114889).

**Identification.** Small tufted plants with numerous basal rosettes of small leaves; stolons short, erect. Leaves pale grey-green, narrowly oblanceolate, densely short-hairy, 1–3 cm long, apex acute, mucronate. Flowering stems 5–12 cm tall, erect, leafy. Inflorescences a dense cluster of several small flower heads. Flower heads with dark-coloured bracts, hairy; flowers white.

**Habitat.** Dry, rocky or sandy sites, on slopes, ridgetops or stony terraces.

**Notes.** This species was locally common at numerous sites across the park, but particularly in the Fiord and Mountain zone. *Antennaria* is a diverse genus and species are difficult to identify. Five species are known on Baffin Island, but only one was recorded in the park.

**Figure 38.** *Antennaria friesiana* subsp. *friesiana*. **A.** Habit. **B.** Basal rosettes. *Gillespie et al. 11623*. **C.** Inflorescences. *Gillespie et al. 11735*. Photos by L.J. Gillespie (A, B) and P.C. Sokoloff (C).

**Figure 39. A.** *Askellia pygmaea*, habit. *Gillespie et al. 11731*. Photo by P.C. Sokoloff. **B.** *Erigeron eriocephalus*, habit, with immature flower heads. *Gillespie et al. 10189*, Victoria Island, Northwest Territories. Photos by P.C. Sokoloff (A) and R.D. Bull (B).

***Askellia pygmaea*** **(Ledeb.) Sennikov**
Syn.: *Crepis nana* Richardson
Dwarf hawksbeard – crépis nain
Figure 39A

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Röthlisberger s.n.* (CAN 10084414), *Wynne-Edwards 9100* (CAN 10084412, E 00554397) • Gibbs Fiord: site GF-1, *Dansereau 500724-0697* (MT 00286206) • Kangiqtualuk Uqquqti: site 30.7, *Gillespie et al. 11731* (CAN 10114949) • Swiss Bay: site SB-1, *Röthlisberger s.n.* (CAN 10084413).

**Identification.** Low tufted glabrous plants with a tap root and flat rosette of leaves. Leaves narrowly spatula-shaped, often lobed. Flowering stems short, about the same length as the leaves. Flower heads narrow; bracts green, long; flowers yellow.

**Habitat.** Dry, gravelly flats, scree slopes, moraines.

**Notes.** We recorded this species at only one site in the park, on the stony-sand delta of the Sam Ford River, where it was rare. The species was also collected four times at three additional locations in the 1950s. Two collections give the habitat as moraines; Wynne-Edwards (*9110*) reported it was very abundant on a steep clay-sand slope of a new moraine, a much more typical habitat than the one where we found it. This habitat specialist is widely scattered across the Canadian Arctic, but not commonly encountered. Outside of the park it has been recorded from six sites on Baffin Island.

***Erigeron eriocephalus* J.Vahl.**
One-flowered fleabane – vergerette à capitule laineux – nunaraqpait (*Erigeron* sp.) (Mallory and Aiken 2012)
Figure 39B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-4, *Röthlisberger s.n.* (CAN 10087006) • Barnes Plateau S: site GE-1, *Dansereau 500811-0252* (MT 00165025).

**Identification.** Herbs 3–15 cm tall, covered with hairs, especially dense on the stem and around the flower heads. Leaves narrow, widest near their tips, unlobed. Flowering stems often dark purplish, leafy, with 1 flower head. Flower heads 1.5–2 cm across; bracts purple, very hairy; ray flowers numerous, white to pale purple, lamina very narrow; disc flowers yellow.

**Habitat.** Moist to dry tundra, snowbed slopes.

**Notes.** This species was collected twice in the park in the 1950s. We did not observe it in 2021, possibly due to the cold summer weather. It is a late-flowering species and the season may have been too short and cold for flowering.

***Hulteniella integrifolia* (Richardson) Tzvelev**
Syn.: *Chrysanthemum integrifolium* Richardson
Entire-leaved daisy – marguerite à feuilles entières
Figure 40

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.4, *Gillespie et al. 11958* (CAN 10114897) • Kangiqtualuk Uqquqti: site 28.6, *Gillespie et al. 11672* (CAN 10114896).

**Identification.** Herbs 5–10 cm tall. Leaves narrow, widest near their base, unlobed, 0.5–1.5 cm long, with hairs only on margins. Flowering stems often dark purplish, with few small bracts and 1 flower head. Flower heads 1.2–1.5 cm wide; bracts purple, hairy; ray flowers white, lamina oblong or oval; disc flowers yellow.

**Notes.** This species was recorded only twice in the park, in the large valleys at the head of Kangiqtualuk Agguqti and Kangiqtualuk Uqquqti. At both sites, the species was uncommon and growing on sheltered, south-facing slopes.

**Habitat.** Moist sandy or rocky slopes.

***Taraxacum ceratophorum* (Ledeb.) DC.**
Horned dandelion – pissenlit tuberculé – imugaq, misartaq (Mallory and Aiken 2012; Blondeau et al. 2011); airaq, airarsajaq (Blondeau et al. 2011); airarsajaq, suputaujalik (Clark 2012, *Taraxacum* spp.)
Figure 41A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 23.11, *Gillespie et al. 11535* (CAN 10114989) • Clark Fiord: site 20.3, *Gillespie et al. 12364* (CAN 10114987) • Kangiqtualuk Agguqti: site 6.4, *Gillespie et al. 11892* (CAN 10114985); site 8.10, *Gillespie et al. 11988* (CAN 10114984) • Kangiqtualuk Uqquqti: site 30.3, *Gillespie et al. 11715* (CAN 10114990) • Kuugaaluk: site 19.3, *Gillespie et al. 12298* (CAN 10114981); site 19.4, *Gillespie et al. 12309* (CAN 10114988) • Remote Lake: RL-1, *Philpot et al. s.n.* (COLO

**Figure 40.** *Hulteniella integrifolia*. **A.** Habitat. **B.** Inflorescences. *Gillespie et al. 11958*. **C.** Habit. *Gillespie et al. 11672*. Photos by L.J. Gillespie.

1382662) site • Tasialuk N: site 26.3, *Gillespie et al. 11582* (CAN 10114986) • Tasialuk S: site 21.12, *Gillespie et al. 12447* (CAN 10114982). Tingijattut: *Dare et al. 84* (CAN 10092116) site TG-2, *Gillespie et al. 12167* (CAN 10114983) site 15.5.

**Identification.** Herbs 6–25 cm tall, with white latex. Leaves basal, narrow, coarsely toothed. Flowering stems leafless, hairy distally, with 1 large flower head. Flower heads 3–4 cm wide; bracts green or purplish green, glabrous, distinctly horned; flowers bright yellow.

Both *Taraxacum ceratophorum* and *T. holmenianum* have large, bright yellow flower heads and coarsely toothed leaves. They differ in stem and flower head bract features; *T. ceratophorum* has hairs on the stem just below the flower head and distinctly horned floral bracts, whereas *T. holmenianum* has glabrous stems and floral bracts with no or small horns.

**Habitat.** Moist to dry sandy and rocky slopes.

**Notes.** *Taraxacum* is a taxonomically difficult genus; here we follow Brouillet (2006). Three species of dandelions were recorded in the park. *Taraxacum ceratophorum* is the most common and widespread species and can grow particularly large in nutrient enriched disturbed sites, such as fox denning areas (Figure 3B).

**Inuit Qaujimajatuqangit.** In Nunavik the roots are reported to be eaten, and the flower heads used to play games (Blondeau et al. 2011; Clark 2012, *Taraxacum* spp.).

***Taraxacum holmenianum* Sahlin**
Holmen's dandelion – pissenlit de Holmen – imugaq, misartaq (*Taraxacum* spp.) (Mallory and Aiken 2012)
Figure 41C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Uqquqti: site 29.2, *Gillespie et al. 11690* (CAN 10114980) • Kuugaaluk: site 16.5, *Gillespie et al. 12214* (CAN 10114979).

**Identification.** Herbs 5–15 cm tall, with white latex. Leaves basal, narrow, coarsely toothed. Flowering stems leafless, glabrous, with 1 large flower head. Flower heads 3–4 cm wide; bracts green or purplish green, glabrous, with no or very small horns; flowers bright yellow.

**Habitat.** Moist to dry sandy and rocky slopes.

**Notes.** This species is much less common than *T. ceraophorum* and was recorded at three sites, two coastal (photographed at Niaqurnaaluk-Qassialuit) and one inland site.

***Taraxacum phymatocarpum* J.Vahl**
Northern dandelion – pissenlit en lyre – imugaq, misartaq (*Taraxacum* spp.) (Mallory and Aiken 2012)
Figure 41D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 23.10, *Gillespie et al. 11528* (CAN 10114991) • Kangiqtualuk Agguqti: site 8.2, *Gillespie et al. 11921* (CAN 10114992) • Kangiqtualuk Uqquqti: site 30.3, *Gillespie et al. 11714* (CAN 10114993) • Remote Lake: site RL-1, *Philpot et al. s.n.* (COLO 01382647).

**Identification.** Herbs 3–10 cm tall with white latex. Leaves basal, narrow, unlobed or with a few small

**Figure 41. A–B.** *Taraxacum ceratophorum*. **A.** Habit. *Gillespie et al. 11892*. **B.** Inflorescence. Gillespie et al. 12364. **C.** *Taraxacum holmenianum*, habit. *Gillespie et al. 12214*. **D.** *Taraxacum phymatocarpum*, infructescence (fruiting head, left) and leaves (right). *Gillespie et al. 11921*. Photos by L.J. Gillespie (A, B, C) and P.C. Sokoloff (D).

teeth. Flowering stems leafless, with 1 flower head. Flower heads about 2 cm wide; bracts green or purplish green, glabrous; flowers pale yellow.

This species is a much smaller plant than the other two species of *Taraxacum* in the park; it may be identified by its leaves that are unlobed or with a few small teeth and smaller, pale yellow flower heads.

**Habitat.** Moist to dry sandy and rocky slopes.

**Inuit Qaujimajatuqangit.** See *T. ceraophorum*.

***Tripleurospermum maritimum* (L.) W.D.J.Koch subsp. *phaeocephalum* (Rupr.) Hämet-Ahti**
Syn.: *Matricaria maritima* L. subsp. *phaeocephala* (Rupr.) Rauschert
Arctic chamomile – matricaire à capitules brunâtres – imugaq, misartaq (Blondeau et al. 2011)
Figure 42

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Niaqurnaaluk-Qassialuit: site 18.1, *Gillespie et al. 12235* (CAN 10114893).

**Identification.** Herbs 10–25 cm tall. Leaves finely divided, mostly near base of plant. Flowering stems weak, often leaning or lying on the ground, with 1 to several large flower heads. Flower heads 3–5 cm wide; bracts green, often with darker margins; ray flowers white, lamina narrowly oblong; disc flowers yellow.

**Habitat.** Seashores, on moist sandy or gravelly sites.

**Notes.** This seashore species was found only once in the park, growing in a densely vegetated depression with a small pool on a rocky shoreline between Niaqurnaaluk and Qassialuit. Associated plants included *Puccinellia phryganodes*, *Stellaria humifusa*, *Cochlearia groenlandica*, *Carex ursina* (also found only here), with *Salix arctica* along the drier margin. The species has a scattered distribution in the Canadian Arctic Islands, mostly in the southern part, and only three other collections (one unconfirmed) are known from northern Baffin Island; our collection is among the northernmost records in eastern Canada.

**Inuit Qaujimajatuqangit.** None recorded in Nunavut. In Nunavik the flower heads are used to play games (Blondeau et al. 2011).

**Boraginaceae**

***Mertensia maritima* (L.) Gray subsp. *tenella* (Fr.) Elven & Skarpaas**
Arctic seaside bluebells – mertensie délicate – siurap uqaujangit (Mallory and Aiken 2012)
Figure 43

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kuugaaluk: site A22.3, *Gillespie et al. 12457* (CAN 10114895) • Niaqurnaaluk-Qassialuit: site 18.1, *Gillespie et al. 12234* (CAN 10114894).

**Identification.** Herbs with stems mostly procumbent. Stems and leaves fleshy, pale blue-green. Flowers in small clusters at end of stems; corolla pale blue or purplish blue, bell-shaped.

**Habitat.** Seashores, sand or stony/cobble beaches.

**Notes.** This seashore species was found at only two sites in the park, on a sand beach at the mouth of Kuugaaluk and in stony depressions along a rocky shoreline between Niaqurnaaluk and Qassialuit. It was uncommon at both sites.

**Figure 42.** *Tripleurospermum maritimum* subsp. *phaeocephalum*. **A.** Habitat. **B.** Inflorescence. **C.** Habitat. *Gillespie et al. 12235*. Photos by L.J. Gillespie.

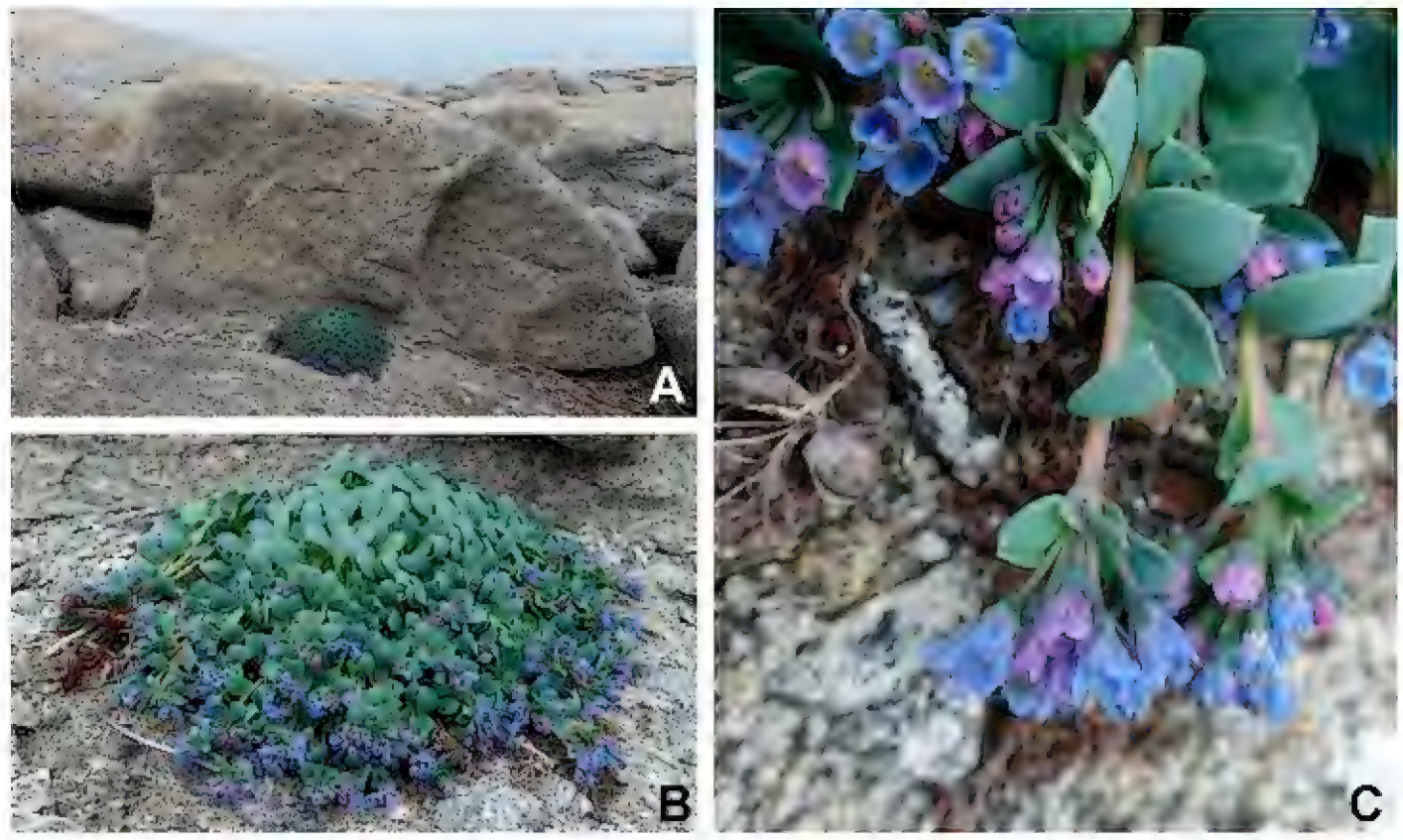


**Figure 43.** *Mertensia maritima* subsp. *tenella*. **A.** Habitat. **B.** Habit. **C.** Inflorescences. Gillespie et al. 12234. Photos by L.J. Gillespie.

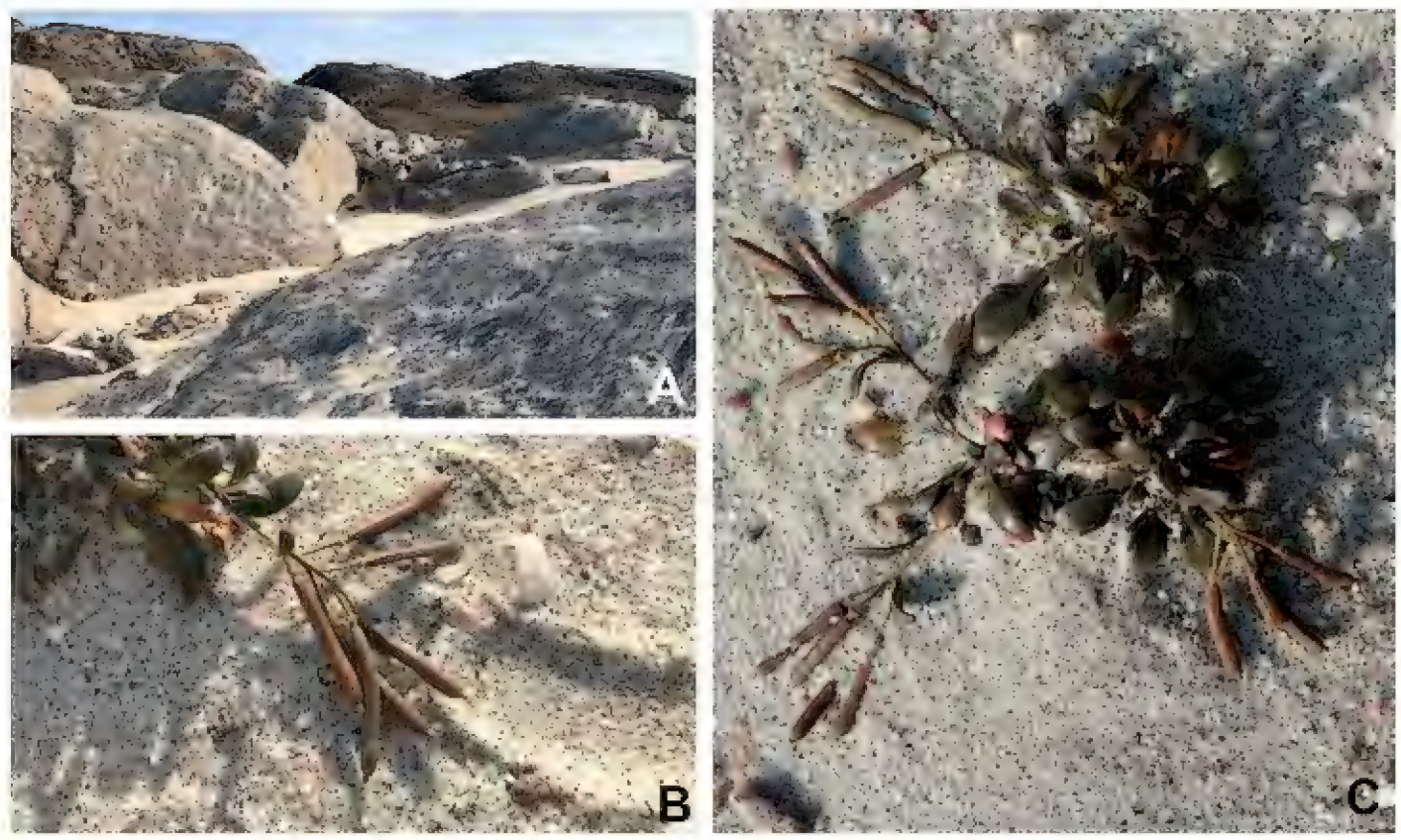


**Figure 44.** *Arabidopsis arenicola*. **A.** Habitat. **B.** Fruits. **C.** Habit. *Gillespie et al. 12438*. Photos by P.C. Sokoloff (A, B) and L.J. Gillespie (C).

## Brassicaceae

***Arabidopsis arenicola*** **(Richardson ex Hook.) Al-Shehbaz, Elven, D.F.Murray & S.I.Warwick**
Syn.: *Arabis arenicola* (Richardson ex Hook.) Gelert
Arctic rockcress – arabette arctique
Figure 44

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tasialuk S: site 21.12, *Gillespie et al. 12438* (CAN 10114994).

**Identification.** Herbs glabrous, with stems procumbent or leaning. Leaves mostly near base of plant with few on stems, fleshy, spatulate, tapered at the base, and with a few small teeth. Petals 4, white, 4–5 mm long. Capsules elongate, at least 6 times longer than wide and not flattened, pinkish-green.

**Habitat.** Sand slopes and flats.

**Notes.** This species is a habitat specialist on sand. We recorded it from only one site in the park, on bare loose sand between rock outcrops on the side of the valley at the south end of Tasialuk. It is a primarily eastern North American Arctic species; our collection is one of the northernmost records in Canada (three other collections are known form northern Baffin Island and one from Ellesmere Island).

***Braya glabella* Richardson subsp. *purpurascens* (R.Br.) Cody**
Purple braya – braya purpurine
Figure 45A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.3, *Gillespie et al. 11953* (CAN 10114996) • Kangiqtualuk Uqquqti: site 28.1, *Gillespie et al. 11627* (CAN 10114995).

**Identification.** Herbs 3–10 cm tall. Leaves basal, narrow, glabrous. Flowering stems erect, purplish, leafless. Petals 4, white to pale purplish, 2–4 mm long. Capsules elongate, 1–1.5 cm long, plump, not flattened, green to dark purple, smooth and glabrous.

**Habitat.** Moist to dry, sandy or rocky sites.

**Notes.** This species was recorded only twice in the park, on a sandy river terrace in the valley at the head of Kangiqtualuk Agguqti and along the rocky turfy shoreline of a lake in the Sam Ford River valley at the head of Kangiqtualuk Uqquqti. This primarly High Arctic species is most common on calcareous substrates.

***Cardamine bellidifolia* L.**
Alpine bittercress – cardamine à feuilles de pâquerette
Figure 45C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.2, *Gillespie et al. 11482* (CAN 10116452); site 24.2, *Gillespie et al. 11549* (CAN 10116453) • Barnes Plateau S: site GL-21, *Raynolds & Bültmann MKR-2022-42* (CAN 10169279) • Clark Fiord: site 20.7, *Gillespie et al. 12372* (CAN 10116459) • Kangiqtualuk Agguqti: site 5.3, *Gillespie et al. 11865* (CAN 10116455) • Kangiqtualuk Uqquqti: site 28.2,

**Figure 45. A–B.** *Braya glabella* subsp. *purpurascens*. **A.** Inflorescence. *Gillespie et al. 11627*. **B.** Habit and fruits, head of Kangiqtualuk Agguqti, August 8, 2021. **C.** *Cardamine bellidifolia*, habit. Gillespie et al. 12372. **D.** *Cochlearia groenlandica*, habit. *Gillespie et al. 11952*. Photos by L.J. Gillespie (A, C) and P.C. Sokoloff (B, D).

*Gillespie et al. 11648* (CAN 10116454) • Kuugaaluk: site 19.2, *Gillespie et al. 12295* (CAN 10116458) • Refuge Harbour: site 11.1, *Gillespie et al. 12012* (CAN 10116456) • Tingijattut: site 15.4, *Gillespie et al. 12162* (CAN 10116457).

**Identification.** Herbs 2–8 cm tall. Leaves basal, spoon-shaped, glabrous. Flowering stems erect, purplish, leafless. Petals 4, white, 4–5 mm long. Capsules stiffly erect, elongate, 1.5–3 cm long, not flattened, usually dark purple, smooth, glabrous.

These tiny plants can be recognized by their spoon-shaped leaves and long narrow purple fruit that stand erect above the leaves.

**Habitat.** Wet, often mossy, tundra, streambanks, moist rock crevices.

***Cochlearia groenlandica* L.**
Greenland scurvygrass – cranson du Groenland – tipitsiarktut nunarait (Mallory and Aiken 2012); qunguliit (Blondeau et al. 2011)
Figure 45D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 23.10, *Gillespie et al. 11529* (CAN 10116461); site AT-5, *Röthlisberger 50* (ZT-00137294), *Röthlisberger 64* (ZT-00137293), *Röthlisberger 125* (ZT-00137295); site AT-3, *Röthlisberger 96* (ZT-00137297) • Kangiqtualuk Agguqti: site 8.3, *Gillespie et al. 11952* (CAN 10116462) • Kangiqtualuk Uqquqti: site 29.3, *Gillespie et al. 11695* (CAN 10116460) • Kuugaaluk: site 16.1, *Gillespie et al. 12196* (CAN 10116464) • Niaqurnaaluk-Qassialuit: site 18.1, *Gillespie et al. 12236* (CAN 10116463).

**Identification.** Herbs 2–30 cm tall, smooth, glabrous, often fleshy. Leaves broadly spoon-shaped, mostly basal. Flowering stems often decumbent, with few narrow leaves, short when in flower, becoming much longer in fruit. Petals 4, white, 1–2 mm long. Capsules ovoid or globose, 0.4–0.7 cm long, smooth, glabrous.

**Habitat.** Coastal sandy or rocky sites.

**Notes.** This is a common species found along seashores throughout the Arctic, and sometimes inland a short distance. Plants are very variable in size and may grow to 30 cm or more in nutrient-enriched habitats. In the park we found it at two seashore sites and three inland sites, the latter along riverbanks and on a river terrace up to about 5 km inland from the coast.

**Inuit Qaujimajatuqangit.** The leaves were commonly eaten; they are high in vitamin C and were eaten to stave off scurvy (Mallory and Aiken 2012).

***Draba arctica* J.Vahl**
Arctic draba – drave arctique
Figure 46A

**Material examined:** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.4, *Gillespie et al. 11956* (CAN 10114997) • Kangiqtualuk Uqquqti: site 29.2, *Gillespie et al. 11692b* (CAN 10114998).

**Identification.** Herbs 2–15 cm tall; leaves, stems, and capsules densely hairy, hairs many-rayed. Leaves in a dense basal rosette, with a tuft of simple hairs at the apex. Flowering stems erect, leafless or with few small leaves, becoming longer in fruit, with 3–15 flowers. Petals 4, white, 4–6 mm long. Capsules oblong or lanceolate, 0.6–1 cm long, flattened.

*Draba* has numerous species in the Arctic that are often difficult to identify; species may be distinguished by flower colour (white or yellow) and the presence and type of hairs on the leaves and fruit (Al-Shehbaz et al. 2010). Six species of white-flowered *Draba* (*D. arctica*, *D. cinerea*, *D. fladnizensis*, *D. lactea*, *D. nivalis*, and *D. subcapitata*) are known from the park. *Draba arctica* and *D. cinerea* may be distinguished from the others by their densely hairy capsules, stems, and leaves, with hairs small and many-rayed; *D. arctica* differs from *D. cinerea* in having simple unbranched hairs on the leaf tip.

**Habitat.** Dry gravelly or rocky slopes of terraces or side valleys.

**Notes.** Only two collections of *Draba arctica* are known in the park, both from large, sheltered valleys at the heads of fiords.

***Draba cinerea* Adams**
Grey-leaved draba – drave cendrée
Figure 46B

**Material examined:** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.2, *Gillespie et al. 11913* (CAN 10116439); site 8.4, *Gillespie et al. 11957* (CAN 10116445); site 8.6, *Gillespie et al. 11972* (CAN 10116443); site 21.5, Gillespie et al. 12426 (CAN 10116436) • Kangiqtualuk Uqquqti: site 27.1, *Gillespie et al.*

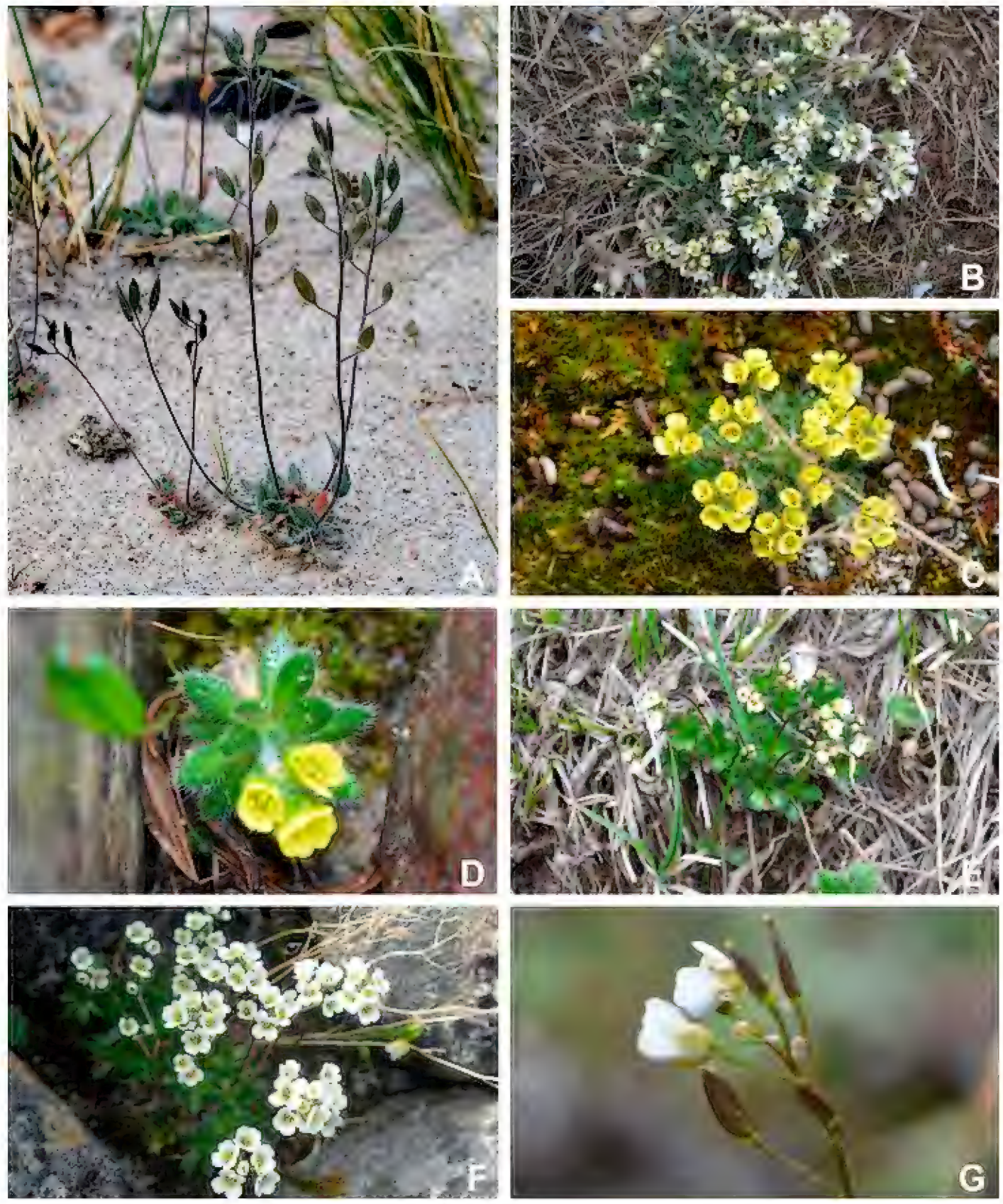


**Figure 46. A.** *Draba arctica*, habit, *Sokoloff 686a*, Ellesmere Island, Nunavut. **B.** *Draba cinerea*, habit. *Gillespie et al. 11972*. **C–D.** *Draba corymbosa*. **C.** Habit. *Gillespie et al. 11742*. **D.** Basal leaves and flowers. *Gillespie et al. 11694*. **E.** *Draba fladnizensis*, habit. *Saarela et al. 5609*, Baffin Island, Nunavut. **F–G.** *Draba lactea*. **F.** Habit. *Gillespie et al. 11639*. **G.** Inflorescence and developing fruits. *Gillespie et al. 11697*. Photos by L.J. Gillespie (A, F) and P.C. Sokoloff (B–E, G).

*11616* (CAN 10116442); site 29.2, *Gillespie et al. 11689* (CAN 10116444); site 30.6, *Gillespie et al. 11730* (CAN 10116438); site 29.2, *Gillespie et al. 11692a* (CAN 10116437) • Kuugaaluk: site 19.4, *Gillespie et al. 12313* (CAN 10116446) • Gibbs Esker: site 20.12, *Gillespie et al. 12403* (CAN 10116447) (cf.) • Tasialuk S: site 21.12, *Gillespie et al. 12445* (CAN 10116440).

**Identification.** Herbs 3–15 cm tall; leaves, stems and capsules densely hairy, hairs many-rayed. Leaves in a dense basal rosette, lacking simple hairs. Flowering stems erect, with 1–3 small leaves, becoming longer in fruit, with 3–15 flowers. Petals 4, white, about 4 mm long. Capsules oblong or elliptic, 0.5–0.8 cm long, flattened.

See *Draba arctica* for their distinguishing characteristics.

**Habitat.** Dry to moist sandy or rocky sites, on slopes, terrace banks, delta and river flats, boulder ridges, and sand troughs between polygons.

**Notes.** *Draba cinerea* is reasonably widespread in the park, found in all three zones. Most collections of white-flowered *Draba* were made in the Fiord and Mountain zone. Only two species (*D. cinerea* and *D. nivalis*) were collected in the Coastal Lowland zone, both at the Kuugaaluk sand hills site, and two (*D.* cf. *cinerea* and *D. lactea*) on the Barnes Plateau, at the two localities near the plateau edge.

***Draba corymbosa* R.Br. ex DC.**
Flat-top draba – drave en corymbe
Figure 46C, D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Uqquqti: site 29.3, *Gillespie et al. 11694* (CAN 10116450) • Marble Lake: site 31.2, *Gillespie et al. 11742* (CAN 10116449).

**Identification.** Herbs 2–8 cm tall. Leaves in a dense basal rosette. Flowering stems erect, leafless, becoming longer in fruit, with 2–9 flowers. Petals 4, yellow, 4–6 mm long. Capsules oblong or ovate, 0.6–1.2 cm long, flattened.

Two species of yellow-flowered *Draba* were recorded in the park. *Draba corymbosa* has flowers with petals 4–6 mm long and *D. micropetala* has smaller flowers with petals 2–3 mm long.

**Habitat.** Moist rocky or gravelly sites.

**Notes.** *Draba corymbosa* is rare in the park; it was found growing in moss among rocks at the base of a ridge at Marble Lake on the Barnes Plateau and on sand among rocks along the Sam Ford River.

***Draba fladnizensis* Wulfen**
Austrian draba – drave de Fladniz
Figure 46E

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Dansereau 500723-0355-56* (MT 00286062) • Kangiqtualuk Uqquqti: site 28.4, *Gillespie et al. 11663b* (CAN 10116451).

**Identification.** Herbs 2–15 cm tall. Leaves with no or few simple or 2-rayed hairs on surfaces, ciliate-margined, in dense basal rosette. Flowering stems erect, glabrous, leafless or with 1–2 small leaves, becoming longer in fruit, with 3–10 flowers. Petals 4, white, 2–2.5 mm long. Capsules oblong or elliptic-lanceolate, 0.3–0.8 cm long, flattened, glabrous.

This species and the common *Draba lactea* have glabrous capsules, and stems and leaves with few or no hairs on their surfaces. Hairs on the leaf undersurface, when present, are simple or 2-rayed in *D. fladnizensis* and multirayed in *D. lactea*. *Draba fladnizensis* has smaller petals (2-2.5 mm long) than *D. lactea* (3-5 mm long).

**Habitat.** Rock outrcrops and talus.

**Notes.** Only two collections of this rare species are known from the park; our collection was made at the base of a southeast-facing granite cliff above boulder talus.

***Draba lactea* Adams**
Milky draba – drave laiteuse
Figure 46F, G

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Dansereau 500723-0355-56* (MT 00286060); site 22.2, *Gillespie et al. 11480* (CAN 10116423) • Barnes Plateau S: site GL-18, *Raynolds & Bültmann MKR-2022-39* (CAN 10169255) • Clark Fiord: site 20.4, *Gillespie et al. 12365* (CAN 10116411) • Gibbs Esker: site 20.12, *Gillespie et al. 12400* (CAN 10116422) • Gibbs Fiord: site 20.10, *Gillespie et al. 12389* (CAN 10116415) • Kangiqtualuk Agguqti: site 3.4, *Gillespie et al. 11843* (CAN 10116413); site 3.5, *Gillespie et al. 11855* (CAN 10116412) • Kangiqtualuk Uqquqti: site 28.1, *Gillespie et al. 11639* (CAN 10114999), *Gillespie et al. 11640* (CAN 10116418), *Gillespie et al. 11641* (CAN 10115000); site 28.4, *Gillespie et al. 11661* (CAN 10116419); site 29.3, *Gillespie et al. 11696* (CAN 10116417), *Gillespie et al. 11697* (CAN 10116416), *Gillespie et al. 11698* (CAN 10116407); site 29.5, *Gillespie et al. 11706* (CAN 10116408); site 30.9, *Gillespie et al. 11733* (CAN 10116409) • Marble Lake: site 31.1, *Gillespie et al. 11740* (CAN 10116414) • Refuge Harbour: site 11.1, *Gillespie et al. 12057* (CAN 10116420); site 11.3, *Gillespie et al. 12059* (CAN 10116421) • Remote Lake: site RL-1, *Philpot et al. s.n.* (COLO 1958651) • Tingijattut: site TG-2, *Dare et al. 90* (CAN 10092158); site 15.4, *Gillespie et al. 12152* (CAN 10116410).

**Identification.** Herbs 2–11 cm tall. Leaves with no or few multicellular hairs on surfaces, ciliate-margined, in a dense basal rosette. Flowering stems erect, leafless or rarely with one small bract, becoming longer in fruit, with 2–8 flowers. Petals 4, white, 3–5 mm long. Capsules oblong or elliptic-lanceolate, 0.4–0.8 cm long, flattened, glabrous.

**Habitat.** Dry to moist rocky or gravelly sites, in rocky tundra, on ridges, river banks and flats.

**Notes.** *Draba lactea* is the most common and widespread species of *Draba* in the park, found at numerous sites at nine localities and in two zones (not recprded in the Coastal Lowland zone).

***Draba micropetala* Hook.**
Small-flowered draba – drave à petits pétales
Figure 47A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kuugaaluk: site 16.3, *Gillespie et al. 12208* (CAN 10116448).

**Identification.** Herbs 1–5 cm tall. Leaves in a dense basal rosette. Flowering stems erect, leafless,

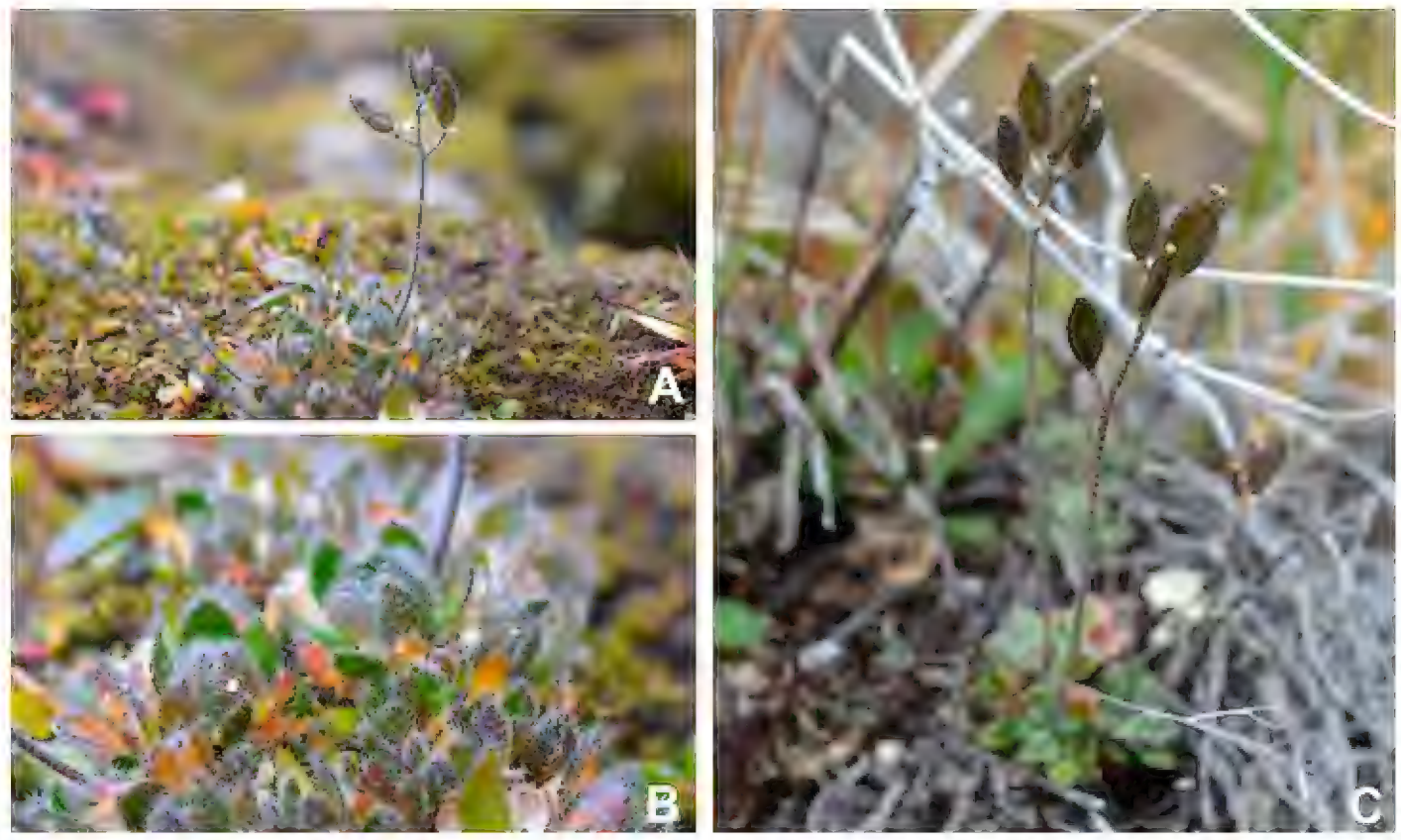


**Figure 47. A–B.** *Draba micropetala*. **A.** Habit. **B.** Basal leaves. *Gillespie et al. 12208*. **C.** *Draba nivalis*, habit. *Gillespie et al. 11840*. Photos by P.C. Sokoloff.

becoming slightly longer in fruit, with 2–8 flowers. Petals 4, yellow, 1.5–2 mm long. Capsules elliptic-ovate, 0.5–1.0 cm long, flattened.

**Habitat.** Moist tundra, gravelly sites.

**Notes.** This yellow-flowered species was found only in wet mossy hummocky ground in the shelter of a large boulder in coastal tundra at the mouth of the Kuugaaluk. It is an uncommon species, mostly restricted to the Canadian Arctic Islands, with several collections known from Baffin Island; our collection is the first for eastern Baffin Island.

***Draba nivalis* Lilj.**
Snow draba – drave des neiges
Figure 47C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Dansereau 500723-0355-56* (MT 00286063); site 23.11, *Gillespie et al. 11537* (CAN 10116429); site 23.10, *Gillespie et al. 11530a* (CAN 10116424) • Barnes Plateau S: site GL-18, *Raynolds & Bültmann MKR-2022-38* (CAN 10169265) • Clark Fiord: site 20.1, *Gillespie et al. 12349* (CAN 10116425); site 20.4, *Gillespie et al. 12366* (CAN 10116435) • Kangiqtualuk Agguqti: site 3.3, *Gillespie et al. 11840* (CAN 10116434); site 8.9, *Gillespie et al. 11985* (CAN 10116433) (cf.); site 21.5, *Gillespie et al. 12425* (CAN 10116432); site 21.7, *Gillespie et al. 12430* (CAN 10116430) • Kangiqtualuk Uqquqti: site 30.5, *Gillespie et al. 11725* (CAN 10116427); site 28.4, *Gillespie et al. 11663a* (CAN 10116431) • Kuugaaluk: site 19.4, *Gillespie et al. 12311* (CAN 10116428) (cf.) • Tasialuk S: site 26.5, *Gillespie et al. 11593* (CAN 10116426).

**Identification.** Herbs 2–8 cm tall. Leaves and stems densely hairy throughout, hairs many-rayed. Leaves without cilia on margins, in dense basal rosette. Flowering stems erect, leafless or with 1 small leaf, becoming longer in fruit, with 3–9 flowers. Petals 4, white, 2–3.5 mm long. Capsules elliptic or oblong-elliptic, 0.3–0.9 cm long, flattened, glabrous or with some many-rayed hairs near valve margins.

*Draba nivalis* may be identified by its hairy stems and leaves with multi-rayed hairs, white flowers, and fruits that are hairless or with a few hairs near the margins.

**Habitat.** Dry to moist sandy or rocky sites, on river and delta flats, riverbanks, slopes, terraces, and troughs between polygons.

**Notes.** *Draba nivalis* is widespread, but uncommon, in the Fiord and Mountain zone and present at one site in the coastal zone, the Kuugaaluk sand hill site (determined as cf. *nivalis*).

***Draba subcapitata* Simmons**
Ellesmere Island draba – drave subcapitée

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GL-18, *Raynolds & Bültmann MKR-2022-41* (CAN 10169284).

**Identification.** Herbs 0.5–5 cm tall; stems and leaf lower surfaces hairy, hairs simple or 2-rayed. Leaves in dense basal rosette. Flowering stems erect, leafless, becoming only slightly longer in fruit, with 2–7 flowers. Petals 4, white or cream, 2–3 mm long. Capsules oblong or ovate, 0.3–0.6 cm long, flattened, usually glabrous, sometimes with few simple hairs.

This white flowered species is distinguished by its diminutive size, and its hairy stems and leaves with hairs that are simple or 2-rayed. Like *D. nivalis* it has mostly glabrous capsules.

**Habitat.** Seepage slopes, gravelly sites.

**Notes.** This High Arctic species was found only once in the park on the Barnes Plateau. It is uncommon on Baffin Island and this collection is the first confirmed record for eastern Baffin Island.

***Eutrema edwardsii* R.Br.**
Edwards' mock wallflower – eutréma d'Edwards
Figure 48

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.7, *Gillespie et al. 11979* (CAN 10116465) • Kangiqtualuk Uqquqti: site 28.6, *Gillespie et al. 11677* (CAN 10116467); site 29.1. *Gillespie et al. 11710* (CAN 10116468) • Remote Lake: site RL-1, *Philpot et al. s.n.* (COLO 1965441) • Tasialuk S: site 21.12, *Gillespie et al. 12442* (CAN 10116466).

**Identification.** Herbs 8–30 cm tall. Stems erect, unbranched, becoming much longer in fruit, with leaves mostly scattered along the stem, and with numerous flowers. Leaves petiolate on lower stem, sessile on upper stem, often held more or less vertically. Petals 4, white, 3–5 mm long. Capsules 1–2.5 cm long, narrow, not flattened, ascending to erect.

**Habitat.** Moist to dry tundra, well drained.

**Notes.** This species was uncommon in the park. Plants are small and inconspicuous when in flower, but more conspicuous in fruit with numerous long, narrow fruits on much taller stems.

***Physaria arctica* (Wormsk. ex Hornem.) O'Kane & Al-Shehbaz**
Syn.: *Lesquerella arctica* (Wormsk. ex Hornem.) S. Watson
Arctic bladderpod – lesquerelle arctique
Figure 49

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.2, *Gillespie et al. 11918* (CAN 10116471) • Kangiqtualuk Uqquqti: site 29.2, *Gillespie et al. 11691* (CAN 10116469); site 30.8, *Gillespie et al. 11732* (CAN 10116470).

**Identification.** Herbs 2–8 cm tall. Leaves spoon-shaped, silvery, densely covered in branched hairs, in basal rosette. Flowering stems leaning, often decumbent, silvery, densely covered in branched hairs, with few smaller leaves and 2–6 flowers. Petals 4, yellow, 5–6 mm long. Capsules globose, purplish red, 0.4–0.6 cm long, smooth, glabrous or with few silvery hairs, on long pedicels.

**Habitat.** Dry, sandy or gravelly flats and river terraces.

**Notes.** This species was uncommon in the park, seen only on dry tops and slopes of river terraces and delta flats in the large valleys at the head of Kangiqtualuk Agguqti and Kangiqtualuk Uqquqti.

**Figure 48.** *Eutrema edwardsii*. **A.** Habit. *Gillespie et al. 11979*. **B.** Fruits. *Gillespie et al. 11710*. Photos by P.C. Sokoloff (A) and L.J. Gillespie (B).

**Figure 49.** *Physaria arctica*. **A.** Habit. **B.** Fruits. *Gillespie et al. 11918*. Photos by P.C. Sokoloff.

**Figure 50.** *Melanocalyx uniflora*. **A.** Habitat. **B.** Inflorescence. **C.** Habit. *Gillespie et al. 11852*. Photos by P.C. Sokoloff.

## Campanulaceae

### *Melanocalyx uniflora* (L.) Morin

Syn.: *Campanula uniflora* L.
Arctic bellflower – campanule uniflore – tikinnguaq, tikingnguaq, tikiapik, tikiujaq (Blondeau et al. 2011; Clark 2012)
Figure 50

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 23.11, *Gillespie et al. 11536* (CAN 10116472) • Clark Fiord: site 20.1, *Gillespie et al. 12340* (CAN 10116475) • Kangiqtualuk Agguqti: site 3.5, *Gillespie et al. 11852* (CAN 10116474) • Kangiqtualuk Uqquqti: site 28.3, *Gillespie et al. 11650* (CAN 10116473) • Remote Lake: site RL-1, *Philpot et al. s.n.* (COLO 1997469), *Philpot et al. s.n.* (COLO 1997501).

**Identification.** Herbs 5–15 cm tall. Leaves ovate to lance-shaped, basal and cauline. Flowering stems erect, with 1 somewhat nodding flower. Petals 5, blue, 6–12 mm long, connate, corolla narrowly bell- or funnel-shaped in lower part, lobes narrow and slightly spreading. Fruits many-seeded capsules, 1–2 cm long.

**Habitat.** Mesic rocky tundra.

**Notes.** This small but distinctive species with bright blue flowers was uncommon.

**Figure 51.** *Arenaria humifusa*. **A.** Habit (mixed with several other species, including *Tofieldia coccinea* with conspicuous sword-shaped leaves). **B.** Flowers, *Gillespie et al. 11632*. Photos by L.J. Gillespie.

**Caryophyllaceae**

***Arenaria humifusa* Wahlenb.**
Creeping sandwort – sabline rampante
Figure 51

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 21.1, *Gillespie et al. 12410* (CAN 10116652) • Kangiqtualuk Uqquqti: site 28.1, *Gillespie et al. 11632* (CAN 10116651).

**Identification.** Low matted herbs 2–5 cm tall, 5–15 cm across. Leaves narrowly ovate or elliptic, small, 0.2–1 cm long, smooth, shiny, glabrous. Flower stems short, same height as leaves or barely longer. Petals 5, white, 3–4 mm long. Fruits brown capsules, 4–4.5 mm.

**Habitat.** Moist gravelly or rocky sites.

**Notes.** This species was rare in the park, found at only two sites in the large valleys at the head of Kangiqtualuk Agguqti and Kangiqtualuk Uqquqti. Our collections are the first records of the species for east-central Baffin Island and among the northernmost records in Canada. Farther north are two localities on northern Baffin Island and one on each on Victoria, Ellesmere, and Cornwallis islands (the latter two not confirmed).

***Cerastium alpinum* L. subsp. *alpinum***
Alpine chickweed – céraiste alpin

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Uqquqti: site 28.1, *Gillespie et al. 11626* (CAN 10116645) • Ravenscraig Harbour: site RH-1, *Dare 2* (CAN 10092201).

**Identification.** Matted herbs, 5–20 cm tall, densely hairy. Leaves broadly elliptic to oval, basal and cauline. Flowering stems weak, ascending to reclining, with 1–3 opposite pairs of leaves, hairs long, tangled. Flowers large, petals 5, white, 1.5 cm long, 2-fid at the apex.

**Habitat.** Tundra, moist rocky and gravelly places.

**Notes.** This species was recorded at only two locations in the park. The two species of *Cerastium* in the park can be difficult to tell apart; *C. alpinum* has longer, densely tangled hairs on the stems, whereas *C. arcticum* has shorter straighter hairs,

***Cerastium arcticum* Lange**
Arctic chickweed – céraiste arctique – nunarait qakuqtat (Mallory and Aiken 2012)
Figure 52

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 23.3, *Gillespie et al. 11511* (CAN 10116647); site 23.6, *Gillespie et al. 11520* (CAN 10116642); site 23.9, *Gillespie et al. 11526* (CAN 10116646) • Barnes Plateau S: site GL-20, *Raynolds & Bültmann MKR-2022-54* (CAN 10169278) • Clark Fiord: site 20.3, *Gillespie et al. 12363* (CAN 10116635); site 20.6, *Gillespie et al. 12368* (CAN 10116636) • Gibbs Fiord: site 20.9, *Gillespie et al. 12381* (CAN 10116637); site 20.11, *Gillespie et al. 12390* (CAN 10116648)

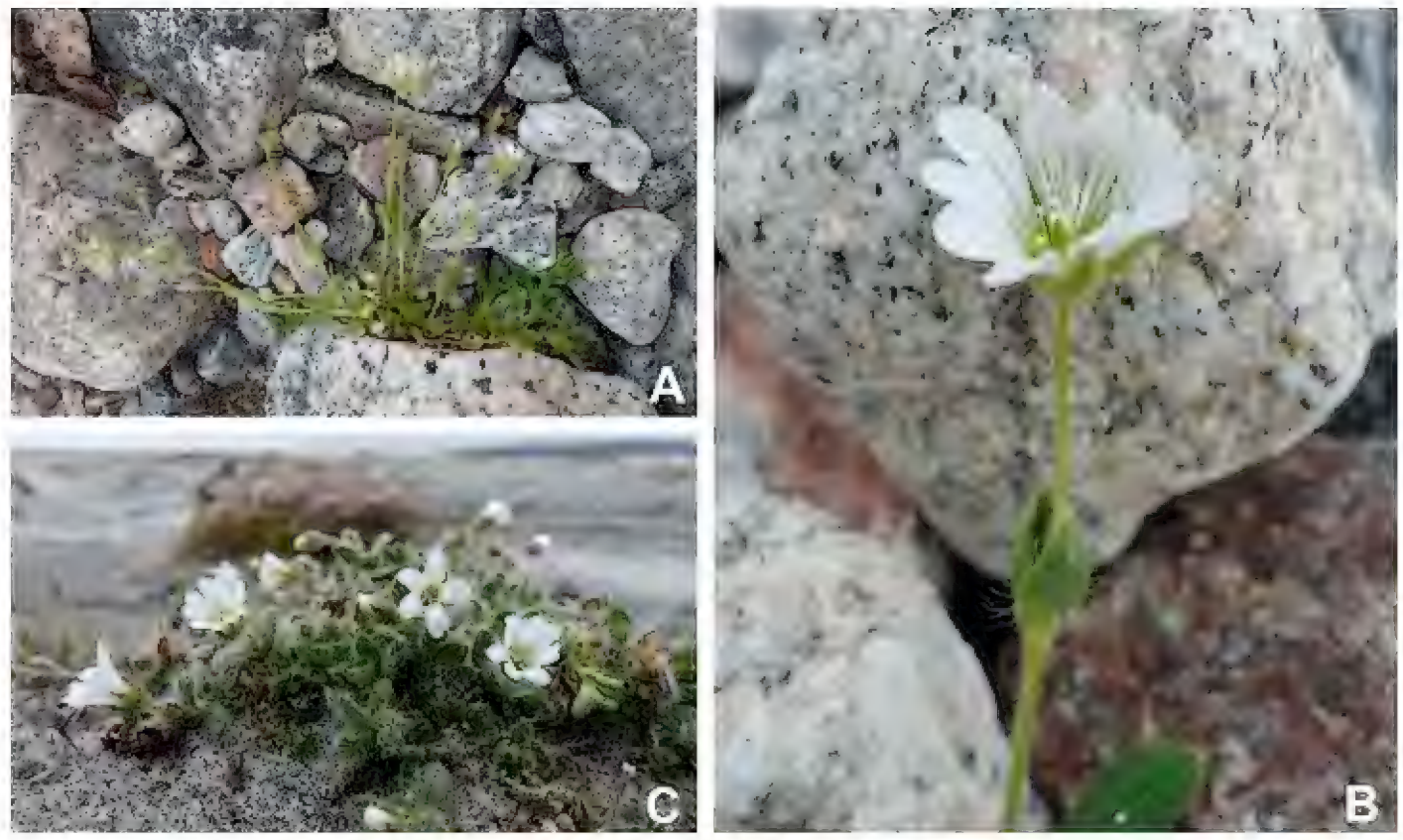


**Figure 52.** *Cerastium arcticum*. **A.** Habit. **B.** Inflorescence. *Gillespie et al. 11576*. **C.** Habit and habitat, coast of Baffin Bay between Niaqurnaaluk and Qassialuit, August 18, 2021. Photos by L.J. Gillespie.

• Kangiqtualuk Agguqti: site 5.3, *Gillespie et al. 11862* (CAN 10116633); site 8.1, *Gillespie et al. 11900* (CAN 10116638); site 8.9, *Gillespie et al. 11984* (CAN 10116640) • Kangiqtualuk Uqquqti: site 29.4, *Gillespie et al. 11702* (CAN 10116639) • Kuugaaluk: site 16.4, *Gillespie et al. 12210* (CAN 10116650) • Ravenscraig Harbour: site RH-1, *Dare 39* (CAN 10092208) • Refuge Harbour: site 12.5, *Gillespie et al. 12049* (CAN 10116643) • Tasialuk N: site 26.1, *Gillespie et al. 11576* (CAN 10116641) • Tingijattut: site 15.9, *Gillespie et al. 12177* (CAN 10116649).

**Identification.** Matted herbs, 5–30 cm tall, sometimes forming loose cushions, densely hairy. Leaves broadly elliptic to oval, basal and cauline. Flowering stems weak, ascending to reclining, with 1–3 opposite pairs of leaves, hairs mostly straight and spreading. Flowers large, petals 5, white, 1.5 cm long, deeply notch at apex.

**Habitat.** Tundra, beaches, shorelines, rocky, gravelly, and sandy places.

**Notes.** This species was observed at numerous localities throughout the park, including at two locations on the Barnes Plateau.

***Cherleria biflora* (L.) A.J.Moore & Dillenb.**
Syn.: *Minuartia biflora* (L.) Schinz & Thell.
Mountain stitchwort – minuartie à deux fleurs
Figure 53

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kuugaaluk: site 16.7, *Gillespie et al. 12222* (CAN 10116551).

**Figure 53.** *Cherleria biflora*. **A.** Habitat. **B.** Habit. **C.** Habit. **D.** Flowers. *Gillespie et al. 12222*. Photos by P.C. Sokoloff (A) and L.J. Gillespie (B, C, D).

**Identification.** Low matted herbs 2–10 cm tall, 5–30 cm across, often forming loose cushions. Leaves narrow, 0.5–1 cm long, smooth, shiny, glabrous. Flowering stems short, not much taller than leaves, minutely glandular-hairy, with 1–3 flowers. Petals 5, white, 5–7 mm long, unnotched. Fruits brown capsules, 5.5 mm long.

**Habitat.** Sandy snowbeds.

**Notes.** This species is rare in the park. Only one population of small to very large plants was seen near the base of a moist sandy south-facing slope above the lagoon at the mouth of Kuugaaluk.

***Honckenya peploides* (L.) Ehrh. subsp. *diffusa* (Hornem.) Hultén ex V.V.Petrovsky**
Northern seabeach sandwort – honckénye faux-pourpier – maliksuagait (Black et al. 2008; Burt et al. 2010); malitsuagait (Blondeau et al. 2011); maliksuagaq, maliksuaraq, malitsuaraq (Clark 2012)
Figure 54

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 23.9, *Gillespie et al. 11525* (CAN 10116505) • Kangiqtualuk Agguqti: site 6.3, *Gillespie et al. 11898* (CAN 10116506); site 8.1, *Gillespie et al. 11910* (CAN 10116507) • Kangiqtualuk Uqquqti: site 30.5, *Gillespie et al. 11723* (CAN 10116512) • Kuugaaluk: site 16.5, *Gillespie et al. 12216* (CAN 10116511); site A22.3, *Gillespie et al. 12456* (CAN 10116504) • Refuge Harbour: site 12.4, *Gillespie et al. 12047* (CAN 10116509) • Tingijattut: site 15.9, *Gillespie et al. 12180* (CAN 10116510).

**Identification.** Matted succulent herbs forming dense, low, bright green mounds, glabrous. Leaves ovate to elliptic. Flowers 1–1.5 cm across, sweet-scented; sepals 5, yellow-green; petals 5, white, small, spoon-shaped.

**Habitat.** Beaches, coastal sandy flats and dunes.

**Notes.** This seashore plant was common on sand beaches in the park (Figure 2E) and was also found on stony-sand river deltas (Figure 6B). Very large sandy hummocks of this species were observed on the sand beach between Niaqurnaaluk and Qassialuit (Figure 2A). Plants turn yellow in late summer.

**Inuit Qaujimajatuqangit.** Leaves are edible (Clark 2012) and are sometimes eaten raw (Burt et al. 2010; or with seal oil (Ootoova et al. 2001). The crushed plant can be used as a disinfectant for wounds and eye infections (Black et al. 2008).

***Sabulina rubella* (Wahlenb.) Dillenb. & Kadereit**
Syn.: *Minuartia rubella* (Wahlenb.) Hiern
Reddish stitchwort – sabline rougeâtre – kakillarnait (Mallory and Aiken 2012)
Figure 55

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GL-18, *Raynolds & Bültmann MKR-2022-40* (CAN 10169280) • Kangiqtualuk Agguqti: site 6.3, *Gillespie et al. 11885* (CAN 10116670); site 8.4, *Gillespie et al. 11955* (CAN 10116671) • Kangiqtualuk Uqquqti: site 29.5, *Gillespie et al. 11708* (CAN 10116678); site 30.4, *Gillespie et al. 11719* (CAN 10116676); site 30.5, *Gillespie et al. 11727* (CAN 10116679) • Tasialuk S: site 26.5, *Gillespie et al. 11589* (CAN 10116677); site 21.12, *Gillespie et al. 12444* (CAN 10116672).

**Figure 54.** *Honckenya peploides* subsp. *diffusa*. **A.** Habitat. Gillespie et al. 11723. **B.** Habitat. *Gillespie et al. 12456*. **C.** Habit. **D.** Flowers. *Gillespie et al. 11898*. Photos by L.J. Gillespie.

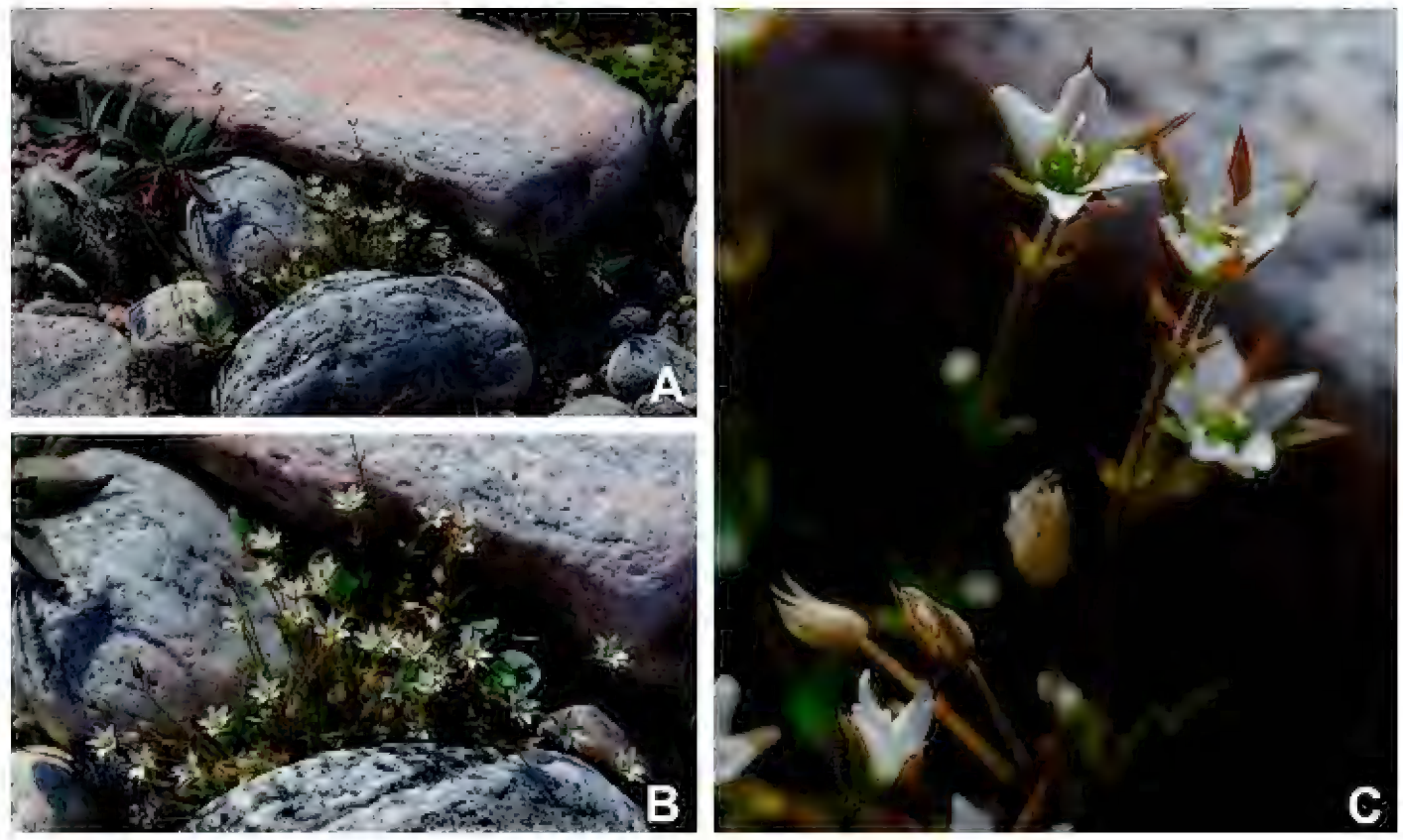


**Figure 55.** *Sabulina rubella*. **A.** Habitat. **B.** Habit. **C.** Flowers. *Gillespie et al. 11719*. Photos by L.J. Gillespie

**Identification.** Low matted herbs 2–6 cm tall and across, often forming small loose cushions. Stems and leaves densely glandular-hairy. Leaves linear, 0.5–1 cm long, 3-nerved. Flowering stems leafy, with 1–3 flowers. Petals 5, white, 2.5–3.5 mm long, unnotched. Fruits brown capsules, 3–5 mm long.

The two species of *Sabulina* found in the park differ in hair presence and leaf venation: *S. rubella* has densely glandular-hairy stems and leaves and 3-nerved leaves, whereas *S. stricta* has glabrous stems and leaves and 1-nerved leaves.

**Habitat.** Dry to moist, sandy and rocky flats and slopes.

**Notes.** *Sabulina rubella* is widespread in the Canadian Arctic.

***Sabulina stricta* (Sw.) Rchb.**
Bog stitchwort – sabline dressée

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 21.2, *Gillespie et al. 12419a* (CAN 10116680) • Kangiqtualuk Uqquqti: site 28.6, *Gillespie et al. 11676* (CAN 10116673); site 29.3, Gillespie et al. 11699 (CAN 10116674); site 29.5, Gillespie et al. 11707 (CAN 10116675).

**Identification.** Low matted herbs 2–10 cm tall and across, often forming small loose cushions. Stems and leaves glabrous. Leaves linear, 0.5–1 cm long. Flowering stems leafy, with 1–3 flowers. Petals 5, white, 2.5–3.5 mm long, unnotched. Fruits brown capsules, 3–5 mm long.

In addition to the differences described above, this species differs from *S. rubella* by its usually longer flower pedicels, to 3 cm long.

**Habitat.** Moist rocky or stony pond and river margins, flats, and banks.

**Notes.** This species, which is restricted to the eastern Canadian Arctic, is uncommon in the park. It was seen only in two large inland valleys at the head of fiords in the Fiord and Mountain zone. Our collections are among the northernmost records in Canada (further north are several collections on northern Baffin Island, none confirmed, and one on Axel Heibery Island).

***Sagina caespitosa* Lange**
Tufted pearlwort - sagine cespiteuse

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Clark Fiord: site 20.7, *Gillespie et al. 12371* (CAN 10121704).

**Identification.** Tiny cespitose herbs 1–4 cm across, 1–2 cm tall. Leaves linear, pointed, mostly clustered at centre or base of plant. Flowering stems numerous, each with 1 flower. Petals usually 5, white, 1.5–3 mm long, equal to or shorter than sepals.

*Sagina caespitosa* is a compact rounded plant covered in many very small leaves and flowers with usually 5 petals that are equal to or shorter than the sepals, whereas *S. nivalis* has leaves in a conspicuous star-shaped cluster at the centre of the plant and very small flowers with typically 4 petals that are longer than the sepals.

**Habitat.** Wet margins of streams, ponds or lakes.

**Notes.** Both species of *Sagina* found in the park are diminutive, easily overlooked plants of wet habitats. *Sagina caespitosa* was rare in the park, recorded at a single site, on stony-cobble flats around a small pond in a side valley off Clark Fiord.

***Sagina nivalis* (Lindblom) Fr.**
Snow pearlwort – sagine des neiges
Figure 56

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.3, *Gillespie et al. 11494* (CAN 10121705) • Barnes Plateau S: site GL-16, *Raynolds & Bültmann MKR-2022-30* (CAN 10169276) • Kangiqtualuk Agguqti: site 6.3, *Gillespie et al. 11884* (CAN 10121707); site 21.2, *Gillespie et al. 12419b* (CAN 10121710) • Kangiqtualuk Uqquqti: site 30.5, *Gillespie et al. 11726* (CAN 10121706) • Kuugaaluk: site 16.1, *Gillespie et al. 12198* (CAN 10121709) • Refuge Harbour: site 12.4, *Gillespie et al. 12046* (CAN 10114756) • Tingijattut: site 15.9, *Gillespie et al. 12178* (CAN 10121708).

**Identification.** Tiny cespitose herbs 1–4 cm across, 1–2 cm tall. Leaves linear, pointed, mostly clustered at centre or base of plant. Flowering stems numerous, each with 1 flower. Petals 4, white, 1.5–3 mm long, longer than the sepals.

**Habitat.** Wet sandy or rocky coastal sites, pond and lake margins.

**Notes.** This species is widespread but uncommon in the park; see *S. caespitosa* for differences with that species.

***Silene acaulis* (L.) Jacq.**
Moss campion – silène acaule – airaq (Burt et al. 2010); airait, aupilattunguangujuq (Mallory and Aiken 2012); amaak, annurisuuq, anurijuuq, anurisiutik, anurituuk, aupilattugait, qasitukallak, quaraq (Blondeau et al. 2011); anurisiutik, quaraq, airaq (Clark 2012).
Figure 57A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 23.5 , *Gillespie et al. 11514* (CAN 10121728) • Gibbs Fiord: site 20.11, *Gillespie et al. 12393* (CAN 10121730) • Kangiqtualuk Agguqti: site 3.3, *Gillespie et al. 11836* (CAN 10121733); site 8.1, *Gillespie et al. 11908* (CAN 10121734) • Kangiqtualuk Uqquqti: site 27.1, *Gillespie et al. 11608* (CAN 10121729) • Kuugaaluk: site 16.1, *Gillespie et al. 12199* (CAN 10121732) • Ravenscraig Harbour: site RH-1, *Dare 26* (CAN 10092891) • Refuge Harbour: site 11.2, *Gillespie et al. 12024* (CAN 10121735) • Tingijattut: site 15.2, *Gillespie et al. 12130* (CAN 10121731).

**Identification.** Plants forming dense hemispherical cushions, 10–30 cm across; taproot long. Leaves small, lance-shaped, densely crowded. Flowers single on leafy stems, appearing to sit on cushion; petals 5, bright pink, 3 mm long. Fruits capsules, 1 cm long.

**Habitat.** Dry to moist (but well-drained) tundra, sandy or rocky flats and slopes.

**Notes.** This distinctive species was uncommon or sometimes locally common at ten localities. Unusually

**Figure 56.** *Sagina nivalis*. **A.** Habitat. **B.** Habit. *Gillespie et al. 12178*. Photos by L.J. Gillespie

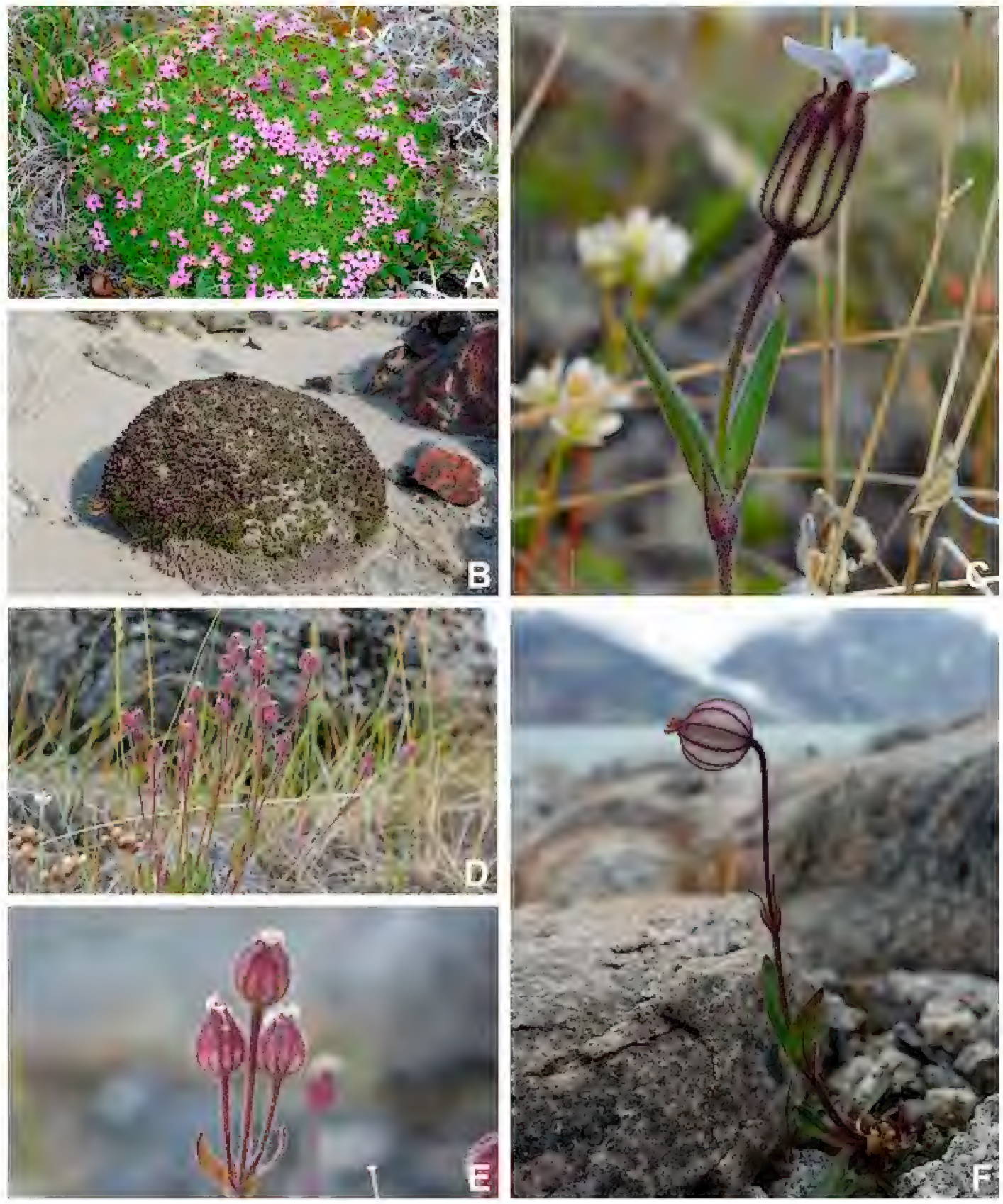


**Figure 57. A–B.** *Silene acaulis*. **A.** Habit. *Gillespie et al. 11608*. **B.** Habit of large cushion plant, sand slope in Tasialuk valley, August 21, 2021. **C.** *Silene involucrata* subsp. *involucrata*, habit. Gillespie et al. 11839. **D–E.** *Silene sorensenis*. **D.** Habit. **E.** Inflorescence. *Gillespie et al. 12296*. **F.** *Silene uralensis* subsp. *arctica*. Habit. *Gillespie et al. 12187*. Photos by L.J. Gillespie (A–B, F) and P.C. Sokoloff (C–E).

large plants, to 30 cm across, were observed at the sand and rock outcrop site on the side of the large valley south of Tasialuk.

**Inuit Qaujimajatuqangit.** The long taproots are sometimes eaten (Burt et al. 2010; Clark 2012). In Nunavik the flowers are also sometimes eaten (Blondeau et al. 2011).

***Silene involucrata* (Cham. & Schltdl.) Bocquet subsp. *involucrata***
Arctic catchfly – silène involucré – nakasuujait (Mallory and Aiken 2012)
Figure 57C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 23.6, *Gillespie et al. 11519* (CAN 10116484); site 23.11, *Gillespie et al. 11539* (CAN 10116485) • Clark Fiord: site 20.1, *Gillespie et al. 12325* (CAN 10116494) • Gibbs Esker: site 20.12, *Gillespie et al. 12395* (CAN 10116486) • Kangiqtualuk Agguqti: site 3.3, *Gillespie et al. 11839* (CAN 10116495); site 8.1, *Gillespie et al. 11901* (CAN 10116490) • Kangiqtualuk Uqquqti: site 29.4, *Gillespie et al. 11703* (CAN 10116493) • Refuge Harbour: site 14.4, *Gillespie et al. 12090* (CAN 10116492) • Stewart Valley: site 15.1, *Gillespie et al. 12119* (CAN 10116488) • Tingijattut: site TG-2, *Dare et al. 83* (CAN 10092190); site 15.3, *Gillespie et al. 12148* (CAN 10116489); site 15.4, *Gillespie et al. 12159* (CAN 10116487).

**Identification.** Herbs 10–20 cm tall. Leaves lance-shaped, 2–6 cm long, mostly clustered at base. Flowering stems erect, subglabrous to moderately glandular-hairy, with 1–3 pairs of opposite leaves and 1–3 erect flowers. Flowers: calyx ovoid, 1–2 cm long, ribs pinkish to dark purple; petals 5, white or sometimes pinkish, portion exerted from calyx tube 4–10 mm long. Fruits many-seeded capsules, included within and about same length as calyx.

**Habitat.** Dry to moist, rocky, gravelly, or sandy flats and slopes.

**Notes.** Although recorded at nine locations throughout the Fiord and Mountain zone and one on the Barnes Plateau, this species was uncommon to rare at these sites.

***Silene sorensenis* (B.Boivin) Bocquet**
Sorensen's catchfly – silène de Sørensen
Figure 57D, E

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kuugaaluk: site 19.3, *Gillespie et al. 12296* (CAN 10116477); site 19.4, *Gillespie et al. 12308* (CAN 10116476) • Tasialuk S: site 26.6, *Gillespie et al. 11598* (CAN 10116478).

**Identification.** Herbs 10–20 cm tall. Leaves lance-shaped, 2–6 cm long, mostly clustered at base. Flowering stems erect, densely glandular-hairy, with 1–3 pairs of opposite leaves and 1–3 erect flowers. Flowers: calyx ovoid, 1–2 cm long, ribs pinkish to dark purple; petals 5, white or sometimes pinkish, portion exerted from calyx tube 3–5 mm long. Fruits many-seeded capsules, included within and about same length as calyx.

This species is similar to *S. involucrata*, but can be distinguished by its more densely glandular-hairy, purplish stems and shorter petals.

**Habitat.** Dry stony or stony sand slopes or hill tops.

**Notes.** *Silene sorensenis* was seen at only two inland localities, along the Kuugaaluk and in the large valley south of Tasialuk.

***Silene uralensis* (Rupr.) Bocquet subsp. *arctica* (Fr.) Bocquet**
Nodding catchfly – silène de l'Oural – pulluliujuit (Mallory and Aiken 2012)
Figure 57F

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 23.12, *Gillespie et al. 11540* (CAN 10116479) • Barnes Plateau S: site GL-20, *Raynolds & Bültmann MKR-2022-58* (CAN 10169275) • Kangiqtualuk Agguqti: site 5.4, *Gillespie et al. 11869* (CAN 10116481); site 21.1, *Gillespie et al. 12409* (CAN 10116480) • Kangiqtualuk Uqquqti: site 28.1, *Gillespie et al. 11635* (CAN 10116483) • Tingijattut: site 15.10, *Gillespie et al. 12187* (CAN 10116482).

**Identification.** Herbs 10–15 cm tall. Leaves lance-shaped, 1–5 cm long, mostly clustered at base. Flowering stems erect, with 1–3 pairs of opposite leaves and 1 pendent flower. Flowers: calyx globose, 1–1.5 cm long, ribs dark purple; petals 5, pinkish to purple, little exerted from calyx tube. Fruits many-seeded capsules, included within and about same length as calyx.

*Silene uralensis* subsp. *arctica* differs from *S. involucrata* subsp. *involucrata* and *S. sorensenis* by its nodding flowers and broader, globose calyx.

**Habitat.** Moist tundra, meadows, streambanks or lakeshores, seeps.

**Notes.** This distinctive species was uncommon in the park.

***Stellaria humifusa* Rottb.**
Saltmarsh starwort – stellaire déprimée – siuraup nunaranga (Mallory and Aiken 2012)
Figure 58A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Uqquqti: site 30.5, *Gillespie et al. 11721* (CAN 10116629) • Kuugaaluk: site 16.5, *Gillespie et al. 12218* (CAN 10116630) • Niaqurnaaluk-Qassialuit: site 18.1, *Gillespie et al. 12231* (CAN 10116628).

**Identification.** Matted herbs, pale yellow-green or pinkish green, glabrous. Stems long, trailing. Leaves opposite, oval, somewhat fleshy, 0.5–1 cm long. Flowers 1 cm across; petals 5, white, deeply notched; anthers yellow.

**Habitat.** Seashores, wet to moist coastal flats and beaches.

**Notes.** This seashore species typically grows as very low mats, but on the sand beach between Niaqurnaaluk and Qassialuit it formed large sandy mounds.

***Stellaria longipes* Goldie**
Long-stalked starwort – stellaire à longs pédicelles – miqqaviat (Mallory and Aiken 2012)
Figure 58C, D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 23.2, *Gillespie et al. 11507* (CAN 10121736) • Clark Fiord: site 20.1, *Gillespie et al. 12348* (CAN 10121746) • Kangiqtualuk Agguqti: site 6.2,

**Figure 58. A–B.** *Stellaria humifusa*. **A.** Habit. *Gillespie et al. 12231*. **B**: Flowers. *Gillespie et al. 12218*. **C–D.** *Stellaria longipes*. **C.** Habit. **D.** Flowers. *Gillespie et al. 12440*. Photos by L.J. Gillespie.

*Gillespie et al. 11877* (CAN 10121737); site 8.2, *Gillespie et al. 11942* (CAN 10121739) • Kangiqtualuk Uqquqti: site 29.4, *Gillespie et al. 11700* (CAN 10121738), *Gillespie et al. 11701* (CAN 10121743) • Kuugaaluk: site 19.3, *Gillespie et al. 12300* (CAN 10121744); site 19.4, *Gillespie et al. 12310* (CAN 10121745) • Refuge Harbour: site 12.5, *Gillespie et al. 12050* (CAN 10121740) • Stewart Valley: site 15.1, *Gillespie et al. 12120* (CAN 10121741) • Tasialuk S: site 21.12, *Gillespie et al. 12440* (CAN 10121747) • Barnes Plateau S: site GL-21, *Raynolds & Bültmann MKR-2022-43* (CAN 10169253) • Ravenscraig Harbour: site RH-1, *Dare 1* (CAN 10092211), *Dare 8* (CAN 10092212).

**Identification.** Matted herbs, pale blue-green or grey-green, glabrous or with fine soft hairs. Stems erect or trailing. Leaves opposite, oval, stiff, 0.5–1 cm long, with prominent midrib and pointed apex. Flowers 1 cm across; petals 5, white, deeply notched; anthers dark red.

**Habitat.** Dry to moist tundra, gravelly or sandy sites, sometimes disturbed.

**Notes.** This is a common species in the park, recorded at 16 localities across the park, including at three sites on the Barnes Plateau (observed at the Gibbs esker and Barnes S meadow/hills localities).

### Ericaceae

#### *Diapensia lapponica* L.

Lapland diapensia – diapensie de Laponie – piruqtut nunaralikuluit (Mallory and Aiken 2012); anurisiutik (Blondeau et al. 2011); kakagutiit, airaq (Clark 2012)
Figure 59

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11794* (CAN 10114924); site 6.1, *Gillespie et al. 11873* (CAN 10116601).

**Identification.** Subshrubs forming hemispherical cushions 4–10 cm across. Leaves small, thick, evergreen, narrowly spoon-shaped, 1–2 cm long, crowded on stem. Flowers 1–1.5 cm across, single on end of stems; petals 5, white, connate and cup-shaped in lower half, lobes round, spreading. Fruits brown capsules; seeds few.

**Habitat.** Dry-mesic tundra, sandy, gravelly, and rocky sites.

**Notes.** This species was rare in the park, seen at several sites at only one locality, the head of Kangiqtualuk Agguqti (camp locality). Our collections are the northernmost records in Canada of this Low Arctic and subarctic species.

**Inuit Qaujimajatuqangit.** In Nunavik roots and flowers are reported to be edible (Clark 2012).

#### *Cassiope tetragona* (L.) D.Don subsp. *tetragona*

Four-angled mountain heather – cassiope tétragone – iksutit (Burt et al. 2010); itsutit, qijuktaat (Mallory and Aiken 2012); itsutik (Blondeau et al. 2011)
Figure 60

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.1, *Gillespie et al.*

**Figure 59.** *Diapensia lapponica*. **A.** Habitat. **B.** Habit. **C.** Flowers. **D.** Developing fruits. *Gillespie et al. 11794*. Photos by L.J. Gillespie.

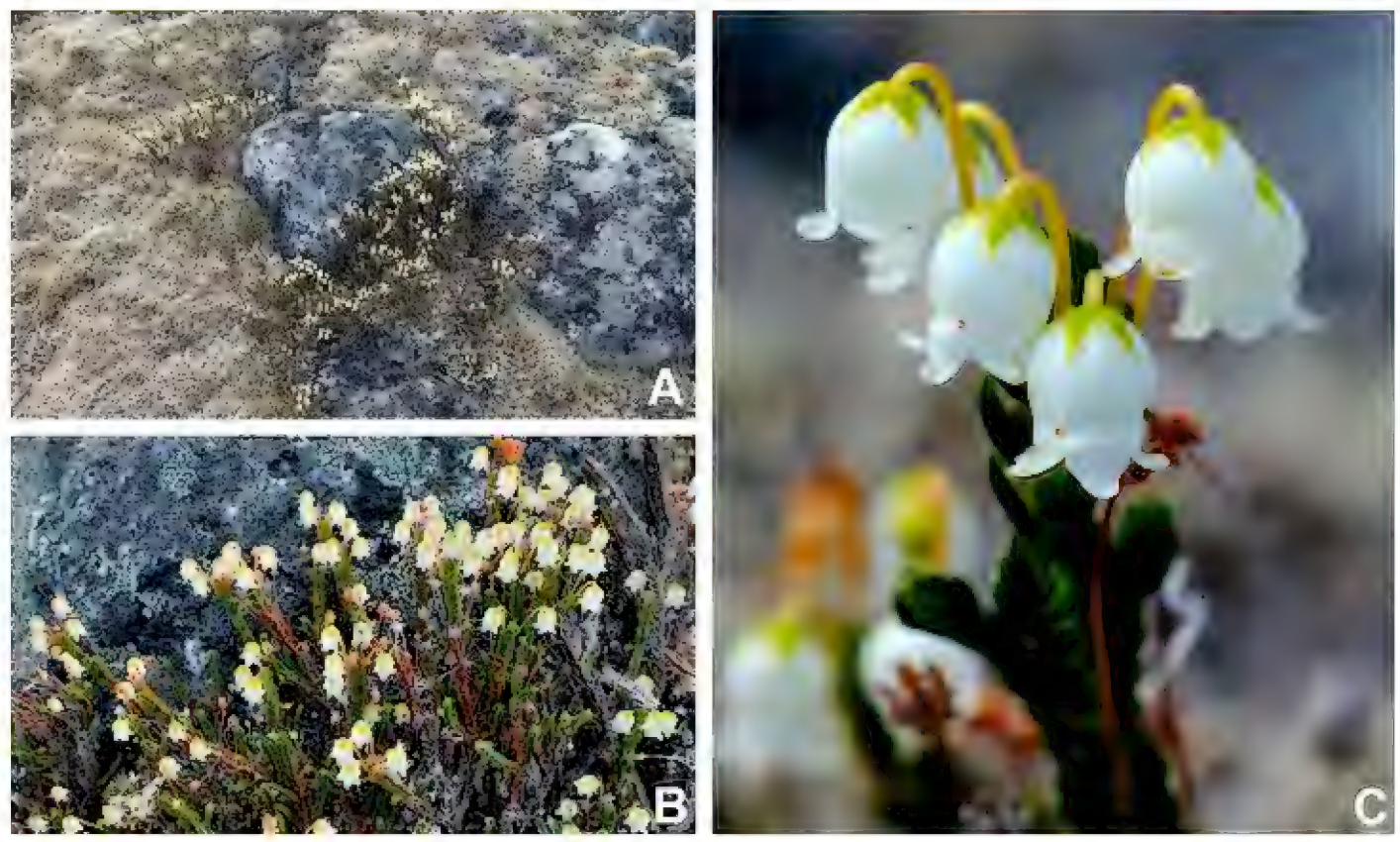


**Figure 60.** *Cassiope tetragona* subsp. *tetragona*. **A.** Habitat. **B.** Habit. **C.** Inflorescence. *Gillespie et al. 11631*. Photos by L.J. Gillespie.

*11464* (CAN 10116718) • Barnes Plateau S: site GL-13, *Raynolds & Bültmann MKR-2022-24* (CAN 10169268) • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11795* (CAN 10116720); site 8.2, *Gillespie et al. 11943* (CAN 10116721) • Kangiqtualuk Uqquqti: site 28.1, *Gillespie et al. 11631* (CAN 10116719) • Kuugaaluk: site 16.8, *Gillespie et al. 12223* (CAN 10116727); site 19.1, *Gillespie et al. 12289* (CAN 10116723) • Ravenscraig Harbour: site RH-1, *Dare 12* (CAN 10092600); site RH-1, *Dare 34* (CAN 10092599) • Refuge Harbour: site 11.1, *Gillespie et al. 12009* (CAN 10116722) • Stewart Valley: site 15.1, *Gillespie et al. 12108* (CAN 10116725) • Tingijattut: site 15.2, *Gillespie et al. 12134* (CAN 10116726).

**Identification.** Low coarse shrubs, 5–20 cm tall, forming broad dense mats. Stems stiff, 4-sided, Leaves dark green, small, overlapping, arranged in four rows, leathery, evergreen. Flowers pendant, on long pedicels, several at the end of erect stems; petals 5, white, mostly connate into cup, lobes small. Fruits brown capsules.

**Habitat.** Dry to moist heath or heath/lichen tundra, where often dominant, also rocky barrens.

**Notes.** This is the most widespread and common vascular plant species in the park. *Cassiope*-moss-lichen tundra is the dominant vegetation type in large areas of the park (Figure 3C, D, 4A, C, E, F, 7F). It was also one of the few plants growing on rocky barrens on the Barnes Plateau and inland Coastal Lowland zone (Figure 3E).

**Inuit Qaujimajatuqangit.** Plants burn readily and can be used as tinder and fuel for fires (Blondeau et al. 2011; Burt et al. 2010; Davis and Banack 2012; Mallory and Aiken 2012). It can also be used to dry bags made from caribou stomach and as bedding or as insulation (Burt et al. 2010, Ootoova et al. 2001).

**Figure 61.** *Empetrum nigrum*. **A.** Habitat. *Gillespie et al. 11838*. **B.** Habit. **C.** Mature fruits, near Kangiqtualuk Agguqti, August 2, 2021. Photos by L.J. Gillespie (A, B) and P.C. Sokoloff (C).

***Empetrum nigrum* L.**
Black crowberry – camarine noire – paurngait (Mallory and Aiken 2012); paurngaq, paurngait (Cuerrier et al. 2019); paurngaqutik, paurngaqautik (Blondeau et al. 2011; Clark 2012)
Figure 61

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 23.7, *Gillespie et al. 11522* (CAN 10116552) • Clark Fiord: site 20.2, *Gillespie et al. 12357* (CAN 10116556) • Kangiqtualuk Agguqti: site 3.3, *Gillespie et al. 11838* (CAN 10116553); site 8.8, *Gillespie et al. 11983* (CAN 10116554) • Kangiqtualuk Uqquqti: site 28.3, *Gillespie et al. 11653* (CAN 10116560) • Kuugaaluk: site 16.8, *Gillespie et al. 12224* (CAN 10116559) • Refuge Harbour: site 12.3, *Gillespie et al. 12041* (CAN 10116555) • Stewart Valley: site 15.1, *Gillespie et al. 12126* (CAN 10116557) • Tingijattut: site TG-2, *Dare et al. 85* (CAN 10092395); site 15.7, *Gillespie et al. 12173* (CAN 10116558).

**Identification.** Low, creeping shrubs. Leaves small, linear, densely covering the stems. Flowers tiny, dark purple, hidden among leaves. Fruits berries, dark black when mature.

**Habitat.** Moist to dry heath or heath/lichen tundra, often sandy or gravelly.

**Notes.** Black crowberry (sometimes called blackberry in the Arctic) is widespread in the park, especially in the Fiord and Mountain zone, but appears to be absent from the Barnes Plateau. It was uncommon or scattered at most sites, but locally common at the Clark Fiord locality.

**Inuit Qaujimajatuqangit.** The berries of this plant are eaten, both as food and as medicine (Burt et al. 2010; Blondeau et al. 2011; Clark 2012; Mallory and Aiken 2012). Davis and Banack (2012) record them eaten mixed with fat and Porsild (1953) records they were sometimes stored in seal fat. The branches are used as bedding (Blondeau et al. 2011; Burt et al. 2010; Mallory and Aiken 2012) and to clean out the barrels of rifles (Mallory and Aiken 2012). It was sometimes used as firewood (the smoke is said to repel mosquitos) (Blondeau et al. 2011; Burt et al. 2010; Clark 2012).

***Pyrola grandiflora* Radius**
Arctic pyrola – pyrole à grandes fleurs – uqkaujat (leaves), kigutauja (flowers) (Burt et al. 2010); igutsait niqingit (Blondeau et al. 2011)
Figure 62

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Arviqtujuq Kangiqtua NW: site 18.4, *Gillespie et al. 12276* (CAN 10116654) • Atagulisaktalik: site AT-1, *Dansereau 500723-0772* (MT 00285790); site 22.2, *Gillespie et al. 11492* (CAN 10116657) • Clark Fiord: site 20.1, *Gillespie et al. 12343* (CAN 10116653) • Gibbs Fiord: site 20.10, *Gillespie et al. 12386* (CAN 10116655) • Kangiqtualuk Agguqti: site 3.2, *Gillespie et al. 11829* (CAN 10116658); site 8.2, *Gillespie et al. 11946* (CAN 10116656) • Kangiqtualuk Uqquqti: site 27.1, *Gillespie et al. 11611* (CAN 10116662) • Refuge Harbour: site 12.2, *Gillespie et al. 12038* (CAN 10116660) • Remote Lake: site RL-1, *Philpot et al. s.n.* (COLO 2378156) • Tingijattut: site TG-2, *Dare et al. 80* (CAN 10092613) • Stewart Valley: site 15.1, *Gillespie et al. 12124* (CAN 10116661).

**Identification.** Erect herbs to 15 cm tall. Leaves round, glossy, bright to dark green, in basal rosette. Flowering stems dark pink, leafless, with 3–8 flowers. Flowers fragrant, scattered along upper part of stem; petals 5, white to pinkish, wide-spreading, 1 cm long. Fruits capsules.

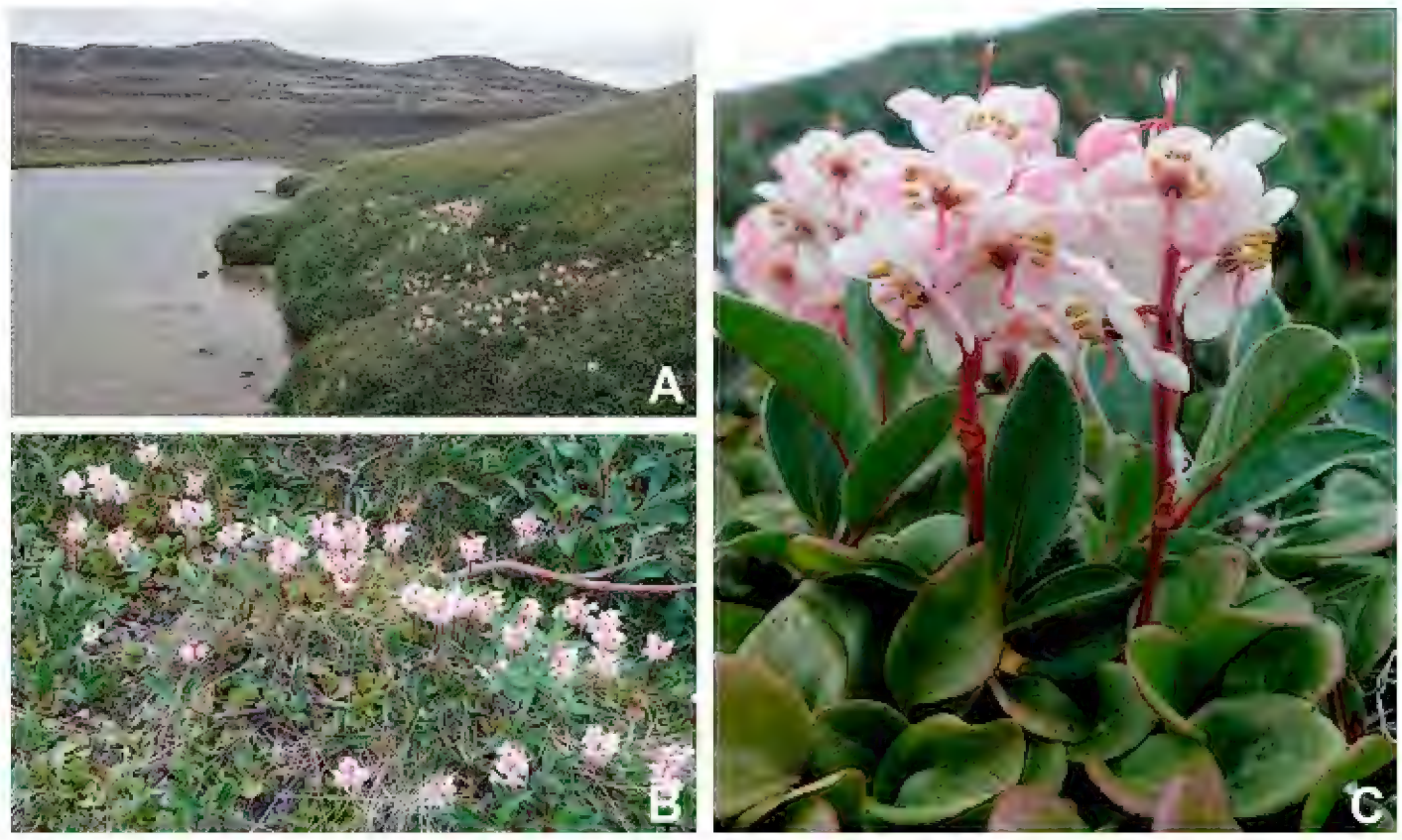


**Figure 62.** *Pyrola grandiflora*. **A.** Habitat. **B.** Habit. **C.** Inflorescences. Kangiqtualuk Agguqti camp, August 1, 2021. Photos by L.J. Gillespie.

**Habitat.** Wet to moist, rocky tundra, meadows.

**Notes.** This species was locally common, often forming dense patches, in the Fiord and Mountain zone, but recorded at only two localities in the Coastal Lowland zone.

**Inuit Qaujimajatuqangit.** The leaves are used to make tea in the Kivalliq region and on Baffin Island (Burt et al. 2010).

***Rhododendron lapponicum* (L.) Wahlenb.**
Lapland rosebay – rhododendron de Laponie – qijjuttaaqpait tipilitt (Mallory and Aiken 2012); mamaittaqutik, tiirluk (Blondeau et al. 2011); mamaittuqutik, mamaittuqutik mikinirsaq (Clark 2012)
Figure 63A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Clark Fiord: site 20.8, *Gillespie et al. 12374* (CAN 10116502) • Kangiqtualuk Agguqti: site 3.5, *Gillespie et al. 11848* (CAN 10116499); site 6.6, *Gillespie et al. 11895* (CAN 10116503); site 8.2, *Gillespie et al. 11950* (CAN 10116500); site 21.2, *Gillespie et al. 12416* (CAN 10116498) • Kangiqtualuk Uqquqti: site 28.2, *Gillespie et al. 11644* (CAN 10116497) • Stewart Valley: site 15.1, *Gillespie et al. 12116* (CAN 10116501) • Tasialuk S: site 26.5, *Gillespie et al. 11599* (CAN 10116496).

**Identification.** Shrubs 10–30 cm tall. Leaves oval, margins flat, with scattered minute brownish scales above, densely covered with minute brownish scales (appearing smooth and pale brown) below. Flowers 1–2 cm across, in showy clusters at ends of branches; petals 5, bright pink, partly connate, lobes spreading. Fruits brown capsules.

**Figure 63. A–B.** *Rhododendron lapponicum*. **A.** Habit. *Gillespie et al. 12416*. **B.** Fruits. *Gillespie et al. 12416*. **C–D.** *Rhododendron tomentosum* subsp. *decumbens*. **C.** Habit. *Gillespie et al. 12416*. **D.** Inflorescences. *Gillespie et al. 11515*. Photos by L.J. Gillespie (A, C), and P.C. Sokoloff (B, D).

The two species of *Rhododendron* found in the park can be separated based on flower colour (pink in *R. lapponicum*, white in *R. tomentosum*) and leaf shape and margins (oval with flat margins in *R. lapponicum*, narrowly oblong with revolute margins in *R. tomentosum*).

**Habitat.** Heath or heath-lichen tundra, often on rocky or stony slopes.

***Rhododendron tomentosum* Harmaja subsp. *decumbens* (Aiton) Elven & D.F.Murray**
Syn.: *Ledum decumbens* (Aiton) Lodd. ex Steud.
Northern Labrador tea – petit thé du Labrador – qijuktaaqpait (Black et al. 2008); qisiqtuutit (Burt et al. 2010); mamaittuqutik, mamaittuquik miminirsaq, mamaittuqutirlaq, tiirluapik, Ttiirlualuk (Blondeau et al. 2011, Clark 2012))
Figure 63C, D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 23.5, *Gillespie et al. 11515* (CAN 10116513) • Kuugaaluk: site 19.2, *Gillespie et al. 12293* (CAN 10116515) • Tingijattut: site 15.7, *Gillespie et al. 12172* (CAN 10116514).

**Identification.** Spreading shrubs 10–30 cm tall. Leaves fragrant, narrowly oblong, margins revolute, dark green and smooth above, densely brown-hairy below. Flowers in showy clusters at ends of branches; petals 5, white, partly connate, lobes spreading. Fruits brown capsules.

See *Rhododendron lapponicum* for a comparison with *R. tomentosum*.

**Habitat.** Heath/lichen or heath tundra, often on drier rocky or stony rises and slopes.

**Notes.** *Rhododendron tomentosum* was uncommon in the park, found at only three locations in the wetter, eastern part of the park (Figure 3D).

**Inuit Qaujimajatuqangit.** The leaves of this species are used to make a medicinal tea (Black et al, 2008; Blondeau et al. 2011; Clark 2012, Davis and Banack 2012; Mallory and Aiken 2012; Porsild 1953), can be chewed like tobacco, and are smoked (Mallory and Aiken 2012). The wood from this shrub is useful as a firewood and burns well even when wet (Burt et al. 2010).

***Vaccinium uliginosum* L.**
Bog bilberry – airelle des marécages – kigutangirnaq (Burt et al. 2010); kiguangirnaq (Davis and Banack 2012); kigutangirnait (Mallory and Aiken 2012); kigutanginaquitik, kigutanginnalikak, kingutiinginnaqutik, kigutinginnaujak (Blondeau et al. 2011); kigutanginnaq, kigutangirnnaq (Cuerrier et al. 2019)
Figure 64A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.2, *Gillespie et al. 11487* (CAN 10116517) • Clark Fiord: site 20.1, *Gillespie et al. 12345* (CAN 10116523) • Kangiqtualuk Agguqti: site 3.2, *Gillespie et al. 11826* (CAN 10116518); site 8.7, *Gillespie et al. 11981* (CAN 10116519); site 21.7, *Gillespie et al. 12429* (CAN 10116521) • Kangiqtualuk Uqquqti: site 28.1, *Gillespie et al. 11633* (CAN 10116524) • Ravenscraig Harbour: site RH-1, *Dare 32* (CAN 10092377) • Refuge Harbour: site 12.2, *Gillespie et al. 12039* (CAN 10116522) • Stewart Valley: site 15.1, *Gillespie et al. 12118* (CAN 10116520) • Tingijattut: site TG-2, *Dare et al. 89* (CAN 10092382).

**Figure 64. A–B.** *Vaccinium uliginosum*. **A.** Habit. *Gillespie et al. 11826*. **B.** Flowers (left), fruits (right). *Gillespie et al. 12118*. **C–D.** *Vaccinium vitis-idaea* subsp. *minus*. **C.** Habit. **D.** Flowers. *Gillespie et al. 12275*. Photos by L.J. Gillespie (A, B left, C) and G.A. Levin (B right, D).

**Identification.** Shrubs to 20 cm tall. Leaves round to oval, pale or bluish green. Flowers hanging below the leaves; petals 5, pink, almost completely connate, corolla urn-shaped. Berries dark blue when mature.

**Habitat.** Heath or heath/lichen tundra, lower slopes of eskers, raised beach ridges.

**Notes.** This species is widespread in the park but was not recorded on the Barnes Plateau; it was often common, and sometimes formed a dominant component of the tundra vegetation. In the Canadian Arctic it is often called tundra blueberry.

**Inuit Qaujimajatuqangit.** The berries of this plants are eaten (both fresh and preserved in fat), and the leaves and stems can be boiled to make tea (Porsild, 1953; Burt et al. 2010; Blondeau et al. 2011; Clark 2012; Davis and Banack 2012; Mallory and Aiken 2012). In Nunavik, the berry juice is used as a medicine (Blondeau et al. 2011) and the leaves as a medicinal tea (Clark 2012).

***Vaccinium vitis-idaea* L. subsp. *minus* (Lodd., G.Lodd. & W.Lodd.) Hultén**
Mountain cranberry – airelle rouge – kakautit (fresh), atungaujait (dried) (Burt et al. 2010); kimgmignaq (Davis and Banack 2012); kimminnait (Mallory and Aiken 2012); kimminaqutik, kimminaquatik, kimminaujaq (Blondeau et al. 2011; Clark 2012); kimminaq (Cuerrier et al. 2019).
Figure 64C, D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Arviqtujuq Kangiqtua NW: site 18.4, *Gillespie et al. 12275* (CAN 10116516).

**Identification.** Very low shrubs, creeping along the ground. Leaves small, oval, glossy, bright green, sometimes reddish. Flowers hanging in clusters at the end of stems; petals 5, pink, partly connate, corolla bell-shaped. Berries deep red.

**Habitat.** Moist heath or heath/lichen tundra.

**Notes.** This species was recorded only once in the park, on the north shore of Arviqtujuq Kangiqtua near its mouth. It was locally abundant at the edge of a bench, mostly restricted to a narrow band near the top of a low bank, either among rocks with moss and lichens or part of a densely vegetated community with *Vaccinium uliginosum* and *Pyrola grandiflora*.

**Inuit Qaujimajatuqangit.** The berries of this plants are eaten (both fresh and preserved in fat) (Porsild 1953; Burt et al. 2010; Blondeau et al. 2011; Clark 2012; Davis and Banack 2012; Mallory and Aiken 2012), and the juice of the berries is used as a medicine (Blondeau et al. 2011; Mallory and Aiken 2012). The old, dried leaves have been smoked as a tobacco substitute, or smoked with tobacco (Burt et al. 2010).

**Onagraceae**

***Chamaenerion latifolium* (L.) Sweet**
Alpine fireweed – épilobe à feuilles larges – paunnat (Black et al. 2008, Mallory and Aiken 2012); kakkautit (Burt et al. 2010); paunnaq (Blondeau et al. 2011).
Figure 65

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 24.5, *Gillespie et al. 11554*

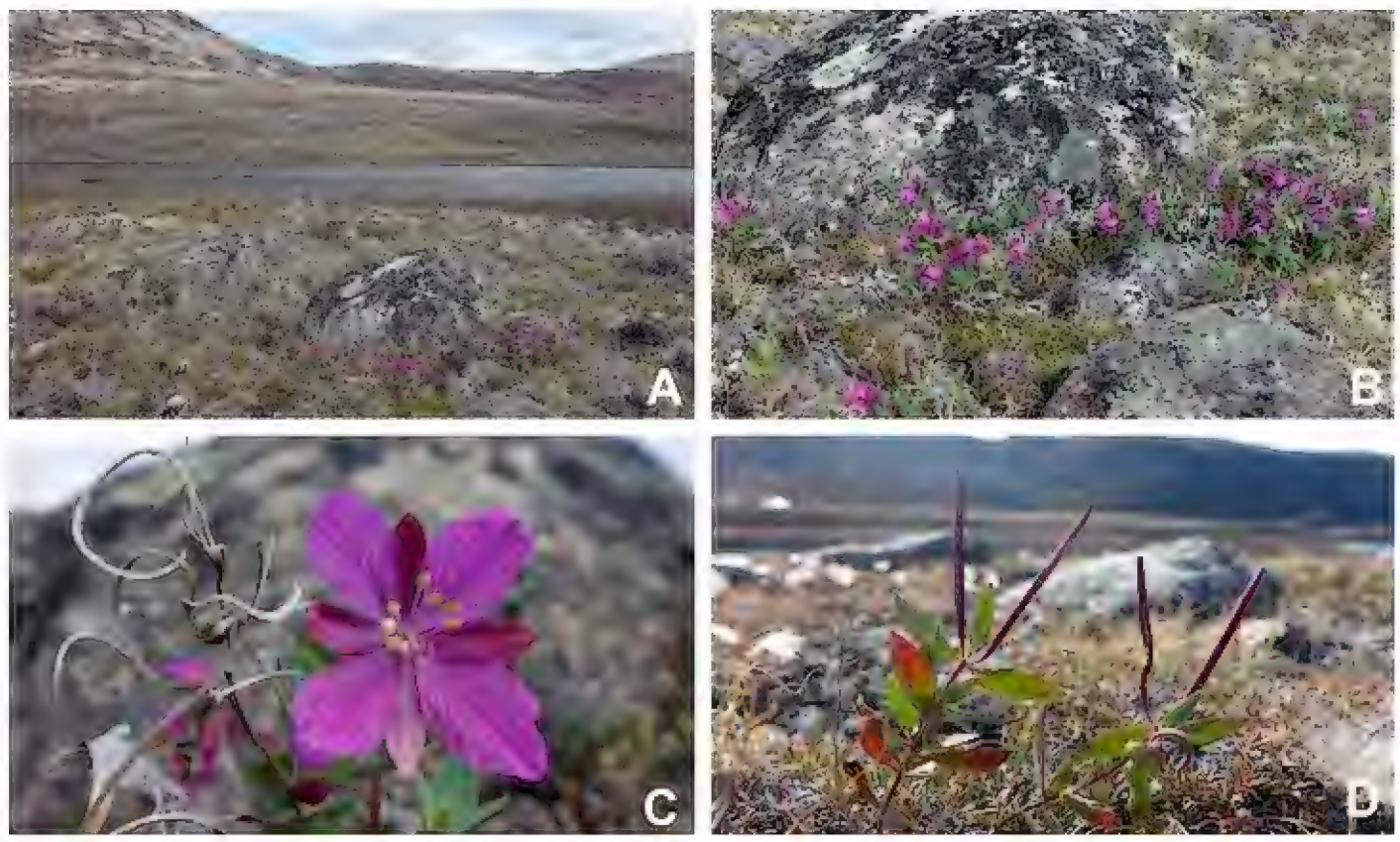


**Figure 65.** *Chamaenerion latifolium*. **A.** Habitat. **B.** Habit. **C.** Flower. Gillespie et al. 11628. **D.** Fruits. *Gillespie et al. 12431.* Photos by L.J Gillespie.

(CAN 10121748) • Barnes Plateau S: site GL-14, *Raynolds & Bültmann MKR-2022-25* (CAN 10169267) • Clark Fiord: site 20.1, *Gillespie et al. 12347* (CAN 10121750) • Kangiqtualuk Agguqti: site 3.6, *Gillespie et al. 11858* (CAN 10121752); site 8.2, *Gillespie et al. 11919* (CAN 10121753); site 21.8, *Gillespie et al. 12431* (CAN 10121756) • Kangiqtualuk Uqquqti: site 28.1, *Gillespie et al. 11628* (CAN 10121742) • Refuge Harbour: site 12.4, *Gillespie et al. 12044* (CAN 10121751) • Stewart Valley: site 15.1, *Gillespie et al. 12123* (CAN 10121754) • Tasialuk S: site 26.5, *Gillespie et al. 11585* (CAN 10121749) • Tingijattut: site 15.5, *et al. 12168* (CAN 10121755).

**Identification.** Low sprawling herbs to 20 cm tall. Leaves oval, pointed. Flowers in clusters of 1–4 at top of stems, 4 cm across; sepals 4, dark pink; petals 4, bright pink. Capsules dark pink or purplish, 3–6 cm long, slender.

**Habitat.** Sandy and gravelly places, gravel bars, open heath-lichen tundra.

**Notes.** This species was very common on stony cobble flats and gravel bars along rivers in the park (Figure 5B, E, H), and sometimes locally common in dry heath-lichen tundra (Figure 6A) and at polygon margins (Figure 6H).

**Inuit Qaujimajatuqangit.** The leaves are used as a tea for treating stomach aches and general sickness (Black et al. 2008)

***Epilobium arcticum* Sam.**
Arctic willowherb – épilobe arctique

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GL-20, *Raynolds & Bültmann MKR-2022-19* (CAN 10169254).

**Identification.** Slender erect herbs 2–10 cm tall. Leaves narrow, 0.8–2 cm long. Flowers small, few; sepals 4, green or purplish; petals 4, white to pale pink. Capsules erect, often reddish purple, 2–4 cm long, slender.

**Habitat.** Wet meadows, seeps.

**Notes.** This species was collected only once in the park on the Barnes Plateau.

**Orobanchaceae**

***Pedicularis flammea* L.**
Red-tipped lousewort – pédiculaire flammée – ugjungait (Mallory and Aiken 2012); igutsait niqingit (Blondeau et al. 2011),
Figure 66A

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 6.1, *Gillespie et al. 11876* (CAN 10116669); site 8.7, *Gillespie et al. 11978* (CAN 10116666); site 21.5, *Gillespie et al. 12424* (CAN 10116667) • Kangiqtualuk Uqquqti: site 27.1, *Gillespie et al. 11620* (CAN 10116668).

**Identification.** Erect herbs 5–15 cm tall, glabrous. Leaves basal and cauline, long, narrow, pinnately lobed. Inflorescence a spike of 5–10 flowers. Corolla 2-lipped, yellow, 1–1.5 cm long, with a dark red hood. Fruits capsules, on elongated stems, often persistent from previous year.

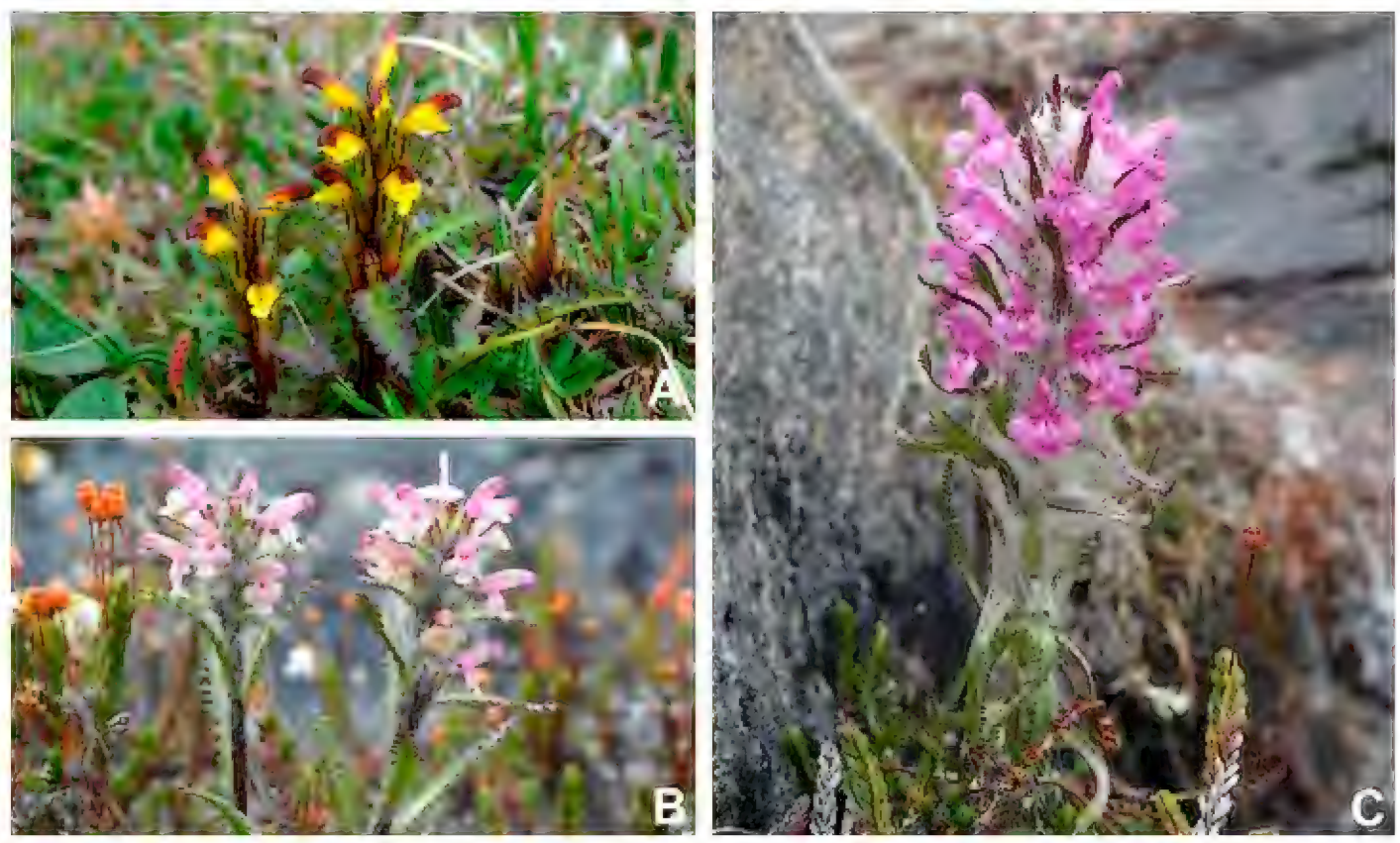


**Figure 66. A.** *Pedicularis flammea*, habit. *Gillespie et al. 11620*. **B.** *Pedicularis hirsuta*, habit. *Gillespie et al. 11827*. **C.** *Pedicularis lanata*, habit. *Gillespie et al. 11669*. Photos by L.J. Gillespie (A, C) and P.C. Sokoloff (B).

Three species of *Pedicularis* were recorded in the park; all have 2-lipped corollas with an upper hood and a lower spreading lip. *Pedicularis flammea* is distinctive in its yellow flowers with a dark red hood; the other two species have pink flowers.

**Habitat.** Moist sedge tundra, sedge or sedge/willow meadows.

**Notes.** This species was recorded only in the large inland valleys at the heads of Kangiqtualuk Agguqti and Kangiqtualuk Uqquqti, and in Stewart Valley (site 15.1, photo voucher); it was uncommon or sometimes locally common at these sites. Our records are the northernmost records in Canada, apart from two dots on northern Baffin and Devon Islands on the map in Porsild and Cody (1980). Although these dots were repeated on maps in Aiken et al. (2007), no collections from these areas have been located for confirmation.

**Inuit Qaujimajatuqangit.** Eaten and used to make tea in Nunavik (Blondeau et al. 2011).

***Pedicularis hirsuta* L.**
Hairy lousewort – pédiculaire hirsute – ugjunnait (Mallory and Aiken 2012)
Figure 66B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.2, *Gillespie et al. 11486* (CAN 10116697) • Barnes Plateau S: site GL-21, *Raynolds & Bültmann MKR-2022-53* (CAN 10169274) • Clark Fiord: site 20.5, *Gillespie et al. 12367* (CAN 10116701) • Gibbs Fiord: site 20.9, *Gillespie et al. 12384* (CAN 10116702) • Kangiqtualuk Agguqti: site 3.2, *Gillespie et al. 11827* (CAN 10116696); site 8.2, *Gillespie et al. 11948* (CAN 10116699); site 21.6, *Gillespie et al. 12428* (CAN 10116703) • Kangiqtualuk Uqquqti: site 29.1, *Gillespie et al. 11683* (CAN 10116705) • Kuugaaluk: site 19.1, *Gillespie et al. 12292* (CAN 10116704) • Marble Lake: site 31.3, *Gillespie et al. 11745* (CAN 10116706) • Niaqurnaaluk-Qassialuit: site 18.2, *Gillespie et al. 12245* (CAN 10116707) • Refuge Harbour: site 11.1, *Gillespie et al. 12008* (CAN 10116698); site 12.8, *Gillespie et al. 12055* (CAN 10116694) • Tasialuk S: site 21.12, *Gillespie et al. 12443* (CAN 10116700) • Tingijattut: site 15.4, *Gillespie et al. 12157* (CAN 10116695).

**Identification.** Erect herbs 3–15 cm tall, densely white hairy; taproot, long, pale yellow. Leaves basal and cauline, long, narrow, pinnately lobed. Inflorescences a spike of 5–25 flowers. Corolla 2-lipped, pale pink, 1–2 cm long, Fruits capsules, on elongated stems.

This species is smaller and more slender than *P. lanata* with fewer, pale pink flowers and a pale yellow taproot.

**Habitat.** Moist rocky tundra and meadows, snowbed margins.

**Notes.** *Pedicularis hirsuta* is widespread throughout the park, though usually not common.

**Inuit Qaujimajatuqangit.** The leaves and roots are eaten (Mallory and Aiken 2012).

***Pedicularis lanata* Willd. ex Cham. & Schltdl.**
Woolly lousewort – pédiculaire laineuse – airaq (Burt et al. 2010); ugjungnaq (Mallory and Aiken 2012); umilik (Blondeau et al. 2011)
Figure 66C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 3.5, *Gillespie et al. 11847* (CAN 10116682) • Kangiqtualuk Uqquqti: site 28.6, *Gillespie et al. 11669* (CAN 10116681) • Refuge Harbour: site 12.1, *Gillespie et al. 12037* (CAN 10116683).

**Identification.** Erect herbs 10–25 cm tall; tarpoot long, bright yellow. Leaves basal and cauline, long, narrow, pinnately lobed. Inflorescences thick cylindrical spikes of 12–60+ flowers, densely white hairy. Corolla 2-lipped, bright pink, 1–2 cm long. Fruits capsules, on elongated stems.

This species is a larger plant than *P. hirsuta* with more numerous bright pink flowers and a distinctive bright yellow taproot.

**Habitat.** Moist rocky tundra.

**Notes.** *Pedicularis lanata* was recorded at only three sites in the park, where it was uncommon.

**Inuit Qaujimajatuqangit.** In Nunavik the roots of *P. lanata* are eaten (Blondeau et al. 2011).

**Papaveraceae**

***Papaver labradoricum* (Fedde) Solstad & Elven**
Labrador poppy – pavot du Labrador – igutsat niqingit (*Papaver* spp.) (Mallory and Aiken 2012)
Figure 67A

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 23.3, *Gillespie et al. 11512* (CAN 10116527) • Kangiqtualuk Uqquqti: site 30.2, *Gillespie et al. 11713* (CAN 10116528) •

**Figure 67. A.** *Papaver labradoricum*, habit. *Gillespie et al. 11512*. **B–D.** *Papaver lapponicum*. **B.** Habitat. **C.** Habit. **D.** Flower (white morph). *Gillespie et al. 11766*. Photos by L.J. Gillespie.

Niaqurnaaluk-Qassialuit: site 18.2, *Gillespie et al. 12249* (CAN 10116526) • Tasialuk S: site 26.5, *Gillespie et al. 11586* (CAN 10116534) • Tingijattut: site 15.4, *Gillespie et al. 12151* (CAN 10116530).

**Identification.** Cespitose herbs 10–25 cm tall. Leaves basal, hairy, 1–2 times pinnately lobed, usually lobed more than 75%, lowermost pair of lobes 20–40° (rarely to 45°) to midrib, usually pointing more-or-less forward. Stem hairs pale to medium brown just below flower, contrasting with the darker sepal hairs. Flowers 1 per stem, 2.5–3.5 cm across; sepals 4, dark brown-hairy, falling when flower opens; petals yellow, usually as wide as long. Fruits elongate capsules to 2 cm long, covered with stiff brown hairs.

Arctic poppies are taxonomically difficult; here we follow Solstad (2009) and Elven et al. (2011). The two species found in the park can be difficult to distinguish. *Papaver labradoricum* may be distinguished by its leaf blades usually lobed more than 75% of the way to the midrib and the lowermost pair of lobes spread at 20–40° (rarely to 45°) to the midrib, usually pointing more-or-less forward (versus usually lobed less than 75% to midrib and lowermost pair of lobes spreading at 30–50° to midrib in *P. lapponicum*). Its stem hairs just below the flowers are pale to medium brown, distinctly contrasting with the darker sepal hairs, and its petals usually are as wide as long (versus stem hairs medium to dark brown, not contrasting with the sepal hairs, and petals usually longer than wide in *P. lapponicum*).

**Habitat.** Sandy or stony slopes and ridges.

**Inuit Qaujimajatuqangit.** The Inuktitut name for poppies means "bumblebee food" and refers to the frequent visits bees make to these flowers (Ootoova et al. 2001).

***Papaver lapponicum* (Tolm.) Nordh.**
Lapland poppy – pavot de Laponie – igutsat niqingit (*Papaver* spp.) (Mallory and Aiken 2012)
Figure 67B–D

**Material examined** Atagulisaktalik: site 24.3, *Gillespie et al. 11550* (CAN 10116531) • Barnes Plateau S: site 31.6, *Gillespie et al. 11766* (CAN 10116525); site GL-18, *Raynolds & Bültmann MKR-2022-56* (CAN 10169277) • Gibbs Esker: site 20.12, *Gillespie et al. 12396* (CAN 10116533) • Gibbs Fiord: site 20.11, *Gillespie et al. 12392* (CAN 10116532) • Kangiqtualuk Agguqti: site 3.2, *Gillespie et al. 11834* (CAN 10116529); site 8.2, *Gillespie et al. 11920* (CAN 10116537) • Kuugaaluk: site 16.4, *Gillespie et al. 12209* (CAN 10116538) • Niaqurnaaluk-Qassialuit: site 18.1, *Gillespie et al. 12232* (CAN 10116540) • Refuge Harbour: site 11.3, *Gillespie et al. 12033* (CAN 10116539); site 14.4, *Gillespie et al. 12091* (CAN 10116536) • Stewart Valley: site 15.1, *Gillespie et al. 12110* (CAN 10116535).

**Identification.** Cespitose herbs 10–25 cm tall. Leaves basal, hairy, 1–2 times pinnately lobed, usually lobed less than 75% to mid-axis, lowermost pair of lobes spreading at 30–50° to mid-axis. Stem hairs medium to dark brown just below flower, similar in colour to sepal hairs. Flowers 1 per stem, 2.5–3.5 cm across; sepals 4, dark brown hairy, falling when flower opens; petals usually yellow, sometimes white, at least some usually longer than wide. Fruits elongate capsules to 2 cm long, covered with stiff brown hairs.

For a comparison with *Papaver labradoricum*, see that species.

**Habitat.** Sandy, stony, or rocky slopes, ridges, and terraces edges.

**Notes.** This species was widespread in the park and was the only poppy species recorded on the Barnes

**Figure 68.** *Armeria maritima* subsp. *sibirica*. **A.** Habitat. Valley south of Tingijattut, August 15, 2021. **B.** Habit. *Gillespie et al. 12446*. Photos by L.J. Gillespie (A) and G.A. Levin (B).

Plateau. While plants typically have yellow flowers, the population at the sand hill/valley locality near the Barnes Ice Cap (*Gillespie et al. 11766*) consisted of shorter plants with both white and yellow flowers.

**Inuit Qaujimajatuqangit.** See *P. labradoricum*.

**Plumbaginaceae**

***Armeria maritima* (Mill.) Willd. subsp. *sibirica* (Turcz. ex Boiss.) Nyman**
Sea thrift – arméria de Sibérie – immulik (Blondeau et al. 2011)
Figure 68

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 23.6, *Gillespie et al. 11518* (CAN 10116711) • Clark Fiord: site 20.7, *Gillespie et al. 12369* (CAN 10116716) • Gibbs Fiord: site 20.11, *Gillespie et al. 12405* (CAN 10116710) • Kangiqtualuk Agguqti: site 6.3, *Gillespie et al. 11887* (CAN 10116713); site 8.1, *Gillespie et al. 11903* (CAN 10116708) • Kangiqtualuk Uqquqti: site 27.1, *Gillespie et al. 11605* (CAN 10116712) • Kuugaaluk: site 16.1, *Gillespie et al. 12188* (CAN 10116715) • Tasialuk N: site 26.3, *Gillespie et al. 11581* (CAN 10116709) • Tasialuk S: site 26.5, *Gillespie et al. 11587* (CAN 10116714); site 21.12, *Gillespie et al. 12446* (CAN 10116717).

**Identification.** Herbs to 20 cm tall; taproot stout. Leaves thin, grass-like. Flowering stems leafless with dense subglobose cluster of flowers at end. Flowers pale pink.

**Habitat.** Dry sandy or gravelly sites, usually coastal, edges of saline-influenced flats.

**Notes.** A characteristic plant of dry, open habitats, especially near the coast.

**Polygonaceae**

***Bistorta vivipara* (L.) Delarbre**
Alpine bistort – renouée vivipare – tuqlak, uqpigait (roots), sapangaralannguat (Burt et al. 2010); sapangaralannguat, turlait, tuqtait (Mallory and Aiken 2012); tursaq (Blondeau et al. 2011)
Figure 69A

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.2, *Gillespie et al. 11481* (CAN 10116728) • Clark Fiord: site 20.1 *Gillespie et al. 12344* (CAN 10116737) • Gibbs Fiord: site 20.11, *Gillespie et al. 12406* (CAN 10116729) • Kangiqtualuk Agguqti: site 3.5. *Gillespie et al. 11845* (CAN 10116730); site 3.6. *Gillespie et al. 11859* (CAN 10116731); site 8.2, *Gillespie et al. 11931* (CAN 10116732) • Kangiqtualuk Uqquqti: site 29.2, *Gillespie et al. 11685* (CAN 10116739) • Kuugaaluk: site 16.1, *Gillespie et al. 12189* (CAN 10116736) • Refuge Harbour: site 11.2, *Gillespie et al. 12018* (CAN 10116733) • Stewart Valley: site 15.1, *Gillespie et al. 12109* (CAN 10116734) • Tasialuk S: site 21.12, *Gillespie et al. 12448* (CAN 10116738) • Tingijattut: site TG-2, *Dare et al. 82* (CAN 10092725); site 15.3, *Gillespie et al. 12150* (CAN 10116735).

**Identification.** Herbs with short thick tubers. Stems erect, unbranched, to 30 cm tall. Leaves mostly basal, narrow, becoming smaller along the stem. Flowers in spikes at end of stem; lower flowers replaced by bulbils that may sprout while still on plant; upper flowers small, sepals white, petals absent.

**Figure 69. A.** *Bistorta vivipara*, inflorescence. Arviqtujuq Kangiqtua, August 18, 2021. **B–C.** *Koenigia islandica*. **B.** Habitat. **C.** Habit. *Gillespie et al. 11870*. **D–F.** *Oxyria digyna*. **D.** Habitat. **E.** Habit. **F.** Inflorescences. *Gillespie et al. 12132*. Photos by L.J. Gillespie (A–B, D–F) and P.C. Sokoloff (C).

**Habitat.** Moist tundra, sometimes meadows or moist sandy slopes

**Notes.** A common plant of tundra throughout the park.

**Inuit Qaujimajatuqangit.** Tubers are eaten (Burt et al. 2010; Clark 2012; Mallory and Aiken 2012), as are the leaves and bulbils (Burt et al. 2010). One of the Inuktitut names, *sapangaralannguat*, means imitation small beads (Burt et al. 2010).

***Koenigia islandica* L.**
Iceland purslane – koenigie d'Islande
Figure 69B, C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 23.8, *Gillespie et al. 11524* (CAN 10121762) • Kangiqtualuk Agguqti: site 5.4, *Gillespie et al. 11870* (CAN 10121760); site 21.2, *Gillespie et al. 12420* (CAN 10121770) • Niaqurnaaluk-Qassialuit: site 18.2, *Gillespie et al. 12246* (CAN 10121761) • Refuge Harbour: site 12.4, *Gillespie et al. 12048* (CAN 10121759).

**Identification.** Tiny, delicate, reddish herbs 0.5–2 cm high. Leaves broadly elliptic to obovate, 1–6 mm long. Flowers tiny, clustered at ends of stems. Sepals reddish; petals absent.

**Habitat.** Wet, mossy streambanks and seeps.

**Notes.** This species is one of the few annual plants found in the Arctic, and the only one found in the park.

***Oxyria digyna* (L.) Hill**
Mountain-sorrel – oxyrie de montagne – siirnat (Burt et al. 2010); qunguliit (Davis and Banack 2012; Mallory and Aiken 2012); qunguliq (Blondeau et al. 2011; Clark 2012)
Figure 69D–F

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.1, *Gillespie et al. 11468* (CAN 10116602); site 23.3, *Gillespie et al. 11505* (CAN 10116605) • Barnes Plateau S: site GL-20, *Raynolds & Bültmann MKR-2022-46* (CAN 10169285) • Clark Fiord: site 20.1, *Gillespie et al. 12342* (CAN 10116612) • Kangiqtualuk Agguqti: site 3.2, *Gillespie et al. 11828* (CAN 10116604); site 8.2, *Gillespie et al. 11935* (CAN 10116607) • Kangiqtualuk Uqquqti: site 28.1, *Gillespie et al. 11630* (CAN 10116603) • Kuugaaluk: site 16.1, *Gillespie et al. 12197* (CAN 10116610) • Niaqurnaaluk-Qassialuit: site 18.1, *Gillespie et al. 12233* (CAN 10116611) • Ravenscraig Harbour: site RH-1, *Dare 5* (CAN 10092732) • Refuge Harbour: site 11.3, *Gillespie et al. 12029* (CAN 10116608) • Tingijattut: site 15.2, *Gillespie et al. 12132* (CAN 10116609).

**Identification.** Densely tufted, reddish herbs 5–30 cm tall. Leaves mostly basal, heart-shaped to almost round, 0.5–6 cm in diameter, somewhat fleshy, glabrous. Flowers tiny, scattered near tops of erect stems. Sepals reddish; petals absent.

**Habitat.** Moist sandy or rocky sites, snowbeds.

**Notes.** This species is widespread in the park, and often locally common. Plants can grow quite large in moist nutrient enriched and sheltered sites.

**Inuit Qaujimajatuqangit.** The sour-tasting leaves of this species are rich in vitamin C and are often chewed as a tangy treat. Raw leaves and flowers are prepared as a concoction (Davis and Banack 2012). The leaves can also be boiled in water to sweeten them and make an invigorating drink (Ootoova et al. 2001).

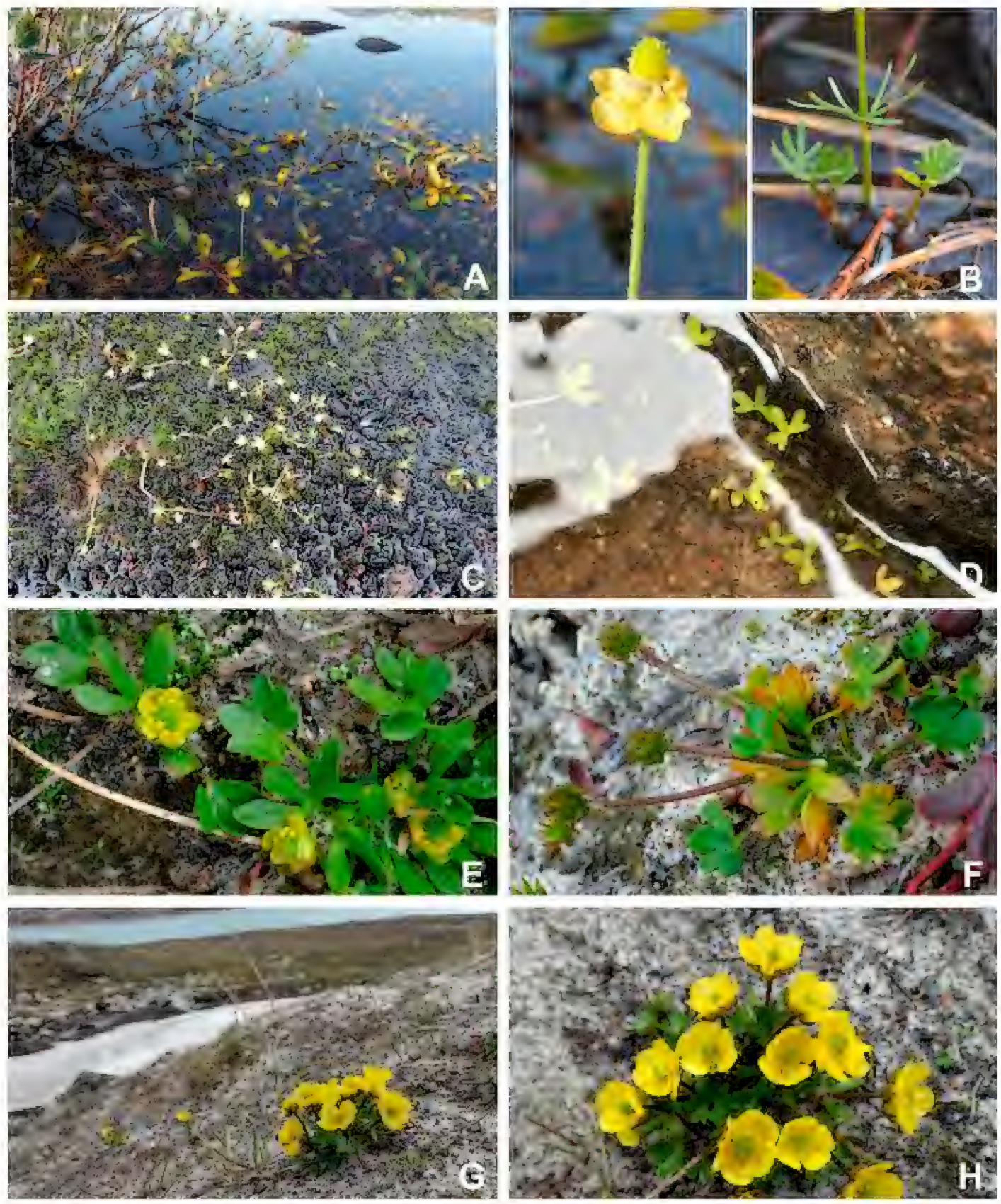


**Figure 70. A–B.** *Ranunculus arcticus*. **A.** Habitat. **B.** Flower (left) and leaves (right). *Gillespie et al. 12408*. **C–D.** *Ranunculus hyperboreus* subsp. *hyperboreus*. **C.** Habit. Arviqtujuq Kangiqtua (August 18, 2021). **D.** Underwater leaves. *Gillespie et al. 12088*. **E–F.** *Ranunculus pygmaeus*. **E.** Habit (flowering). *Gillespie et al. 12219*. **F.** Habit (fruiting). *Gillespie et al. 12215*. **G–H.** *Ranunculus nivalis*. **G.** Habitat. **H.** Habit. *Gillespie et al. 12314*. Photos by L.J. Gillespie (A, B left, C, E–F, G–H) and P.C. Sokoloff (B right, D).

**Ranunculaceae**

***Ranunculus arcticus* Richardson**
Northern buttercup – renoncule arctique
Figure 70A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 21.1, *Gillespie et al. 12408* (CAN 10116561).

**Identification.** Erect herbs 10–30 cm tall. Basal leaves deeply lobed into 5–9 narrow segments, stem leaves with fewer, linear segments. Flowers 1 or 2 per stem, 15–20 mm across; sepals 5, with dense, greyish hairs on outer surface; petals 5–10, bright yellow.

**Habitat.** Gravelly or sandy, dry to moist sites.

**Notes.** Although this species is often found in dry to moist habitats, the one population we found in the park was growing in shallow water at the edge of a pond; the plants probably were inundated when the pond expanded after heavy rain.

***Ranunculus hyperboreus* Rottb. subsp. *hyperboreus***
Far-northern buttercup – renoncule hyperboréale – Iguttait niqingita ajjikasingit (Mallory and Aiken 2012)
Figure 70C, D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.3, *Gillespie et al. 11499* (CAN 10121772) • Barnes Plateau S: site GL-15, *Raynolds & Bültmann MKR-2022-26* (CAN 10169251) • Kangiqtualuk Agguqti: site 21.2, *Gillespie et al. 12418* (CAN 10121773) • Refuge Harbour: site 14.2, *Gillespie et al. 12088* (CAN 10121771).

**Identification.** Small sprawling herbs less than 2 cm tall. Leaves deeply 3-lobed, the lateral lobes sometimes shallowly lobed. Flowers 1 per stem, 5–8 mm wide; sepals 3–4, glabrous; petals 3–4, yellow.

**Habitat.** Wet sandy or turfy sites, creeks, pond and lake margins.

**Notes.** This species is a sprawling plant of very wet sites and may be submersed under water. Flowers were often absent in populations observed in the park.

***Ranunculus pygmaeus* Wahlenb.**
Pygmy buttercup – renoncule naine
Figure 70E, F

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 23.4, *Gillespie et al. 11513* (CAN 10121775) • Kuugaaluk: site 16.5, *Gillespie et al. 12215* (CAN 10121774); site 16.6, *Gillespie et al. 12219* (CAN 10121776).

**Identification.** Small, tufted herbs 0.5–4 cm tall, with spreading to erect stems. Leaves deeply 3-lobed, the lateral and sometimes terminal lobes shallowly lobed. Flowers 1 per stem, 5–8 mm wide; sepals 5, sparsely hairy on outer surface; petals 5, pale yellow.

**Habitat.** Wet to moist sandy or turfy sites, snowbeds.

**Notes.** *Ranunculus pygmaeus* frequently grows in moist snowbed communities and was very abundant by the lagoon at the mouth of Kuugaaluk, forming a dense green band near the base of a south facing slope, where a snowbed had recently melted (Figure 2F, background).

***Ranunculus nivalis* L.**
Snow buttercup – renoncule des neiges – iguttait niqingita ajjikasingit (Mallory and Aiken 2012)
Figure 70G, H

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.2, *Gillespie et al. 11479* (CAN 10121757); site 23.1, *Gillespie et al. 11504* (CAN 10121777) • Barnes Plateau S: site GL-19, *Raynolds & Bültmann MKR-2022-52* (CAN 10169293) • Kangiqtualuk Agguqti: site 3.5, *Gillespie et al. 11853* (CAN 10121758), *Gillespie et al. 11854* (CAN 10121763) • Kangiqtualuk Uqquqti: site 28.4, *Gillespie et al. 11660* (CAN 10121778) • Kuugaaluk: site 16.7, *Gillespie et al. 12221* (CAN 10121765); site 19.4, *Gillespie et al. 12314* (CAN 10121766), *Gillespie et al. 12321* (CAN 10121767) • Refuge Harbour: site 11.3, *Gillespie et al. 12058* (CAN 10121769) • Tingijattut: site 15.4, *Gillespie et al. 12155* (CAN 10121764).

**Identification.** Tufted herbs to 10 cm tall. Basal leaves deeply 3-lobed, each lobe also deeply divided. Flowers 1 per stem, 15–25 mm wide; sepals 5, densely brownish-black hairy on outer surface; petals 5, deep yellow. Fruits small, 1-seeded achenes, clustered in a dense head on a long stem.

**Figure 71.** *Dryas integrifolia* subsp. *integrifolia*. **A.** Habitat. **B.** Habit. Valley at head of Kangiqtualuk Agguqti, August 8, 2021. **C.** Developing fruits. *Gillespie et al. 11944*. **D.** Dispersing fruits. *Gillespie et al. 12433*. Photos by L.J. Gillespie.

**Habitat.** Moist to wet, often mossy sites, snowbeds.

**Notes.** A common buttercup, especially on snowbeds (Figure 3A).

**Rosaceae**

***Dryas integrifolia* Vahl subsp. *integrifolia***
Entire-leaved mountain avens – dryade à feuilles entières – isurramuat, malikkaat (Burt et al. 2010); isuqtannguat (Mallory and Aiken 2012); maqraq, miqqualiqautik, miqqualiapik, uqitujuaapik (Blondeau et al. 2011)
Figure 71

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.2, *Gillespie et al. 11488* (CAN 10116693) • Clark Fiord: site 20.1, *Gillespie et al. 12338* (CAN 10116684) • Gibbs Fiord: site 20.9, *Gillespie et al. 12380* (CAN 10116691) • Kangiqtualuk Agguqti: site 3.5, *Gillespie et al. 11844* (CAN 10116686); site 8.2, *Gillespie et al. 11944* (CAN 10116687); site 21.8, *Gillespie et al. 12433* (CAN 10116692) • Kangiqtualuk Uqquqti: site 27.1, *Gillespie et al. 11610* (CAN 10116685) • Refuge Harbour: site 12.1, *Gillespie et al. 12036* (CAN 10116688) • Stewart Valley: site 15.1, *Gillespie et al. 12115* (CAN 10116689) • Tingijattut: site TG-2, *Dare et al. 88* (CAN 10092777); site 15.4, *Gillespie et al. 12153* (CAN 10116690).

**Identification.** Low mat-forming shrubs. Leaves small, narrow, unlobed, white-hairy below. Flowers 2–3 cm across; petals 8–10, white; stamens and carpels many, yellow. Fruiting heads white, feathery, each achene bearing long, feathery tail.

**Habitat.** Moist to dry tundra.

**Notes.** This is a common widespread species in the park, occasionally dominant on sandy slopes or stony river terraces. In the high and western Canadian Arctic Islands this species is often the dominant vascular plant in dry tundra and calcareous rocky barrens.

**Inuit Qaujimajatuqangit.** The flowering and fruiting time of this species can be used to indicate the change in the seasons (Mallory and Aiken 2012); the Inuktitut name *malikkaat* means "follows the seasons" and *isurramuat* means "follows the sun" (Burt et al. 2010). The dry seed heads can be used as a wick for the qulliq and as a firestarter (Burt et al. 2010).

***Potentilla arenosa* (Turcz.) Juz. subsp. *arenosa***
Bluff cinquefoil – potentille des escarpements
Figure 72A

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 6.3, *Gillespie et al. 11891* (CAN 10116664) • Kangiqtualuk Uqquqti: site 29.2, *Gillespie et al. 11693* (CAN 10116613); site 29.4, *Gillespie et al. 11705* (CAN 10116615).

**Identification.** Tufted herbs 10–25 cm tall. Leaves mostly clustered at base, palmately divided, leaflets 3, toothed; petioles with long verrucose hairs, abundant short stiff hairs, and no short, fine curly hairs; blades whitish below with dense short hairs. Flowering stems with 1–2 leaves, usually branched, (1)2–7-flowered. Flowers: petals 5, yellow, 4–7 mm long and wide, narrowed at base, broadly 2-lobed at apex.

*Potentilla* is a large, complex genus characterized by palmately or pinnately divided leaves and yellow flowers. It may be distinguished from the unrelated but superficially similar genus *Ranunculus* (buttercups) by having stipules and flowers with an epicalyx of green bracts below green sepals. Many species are difficult to identify and hybrids are frequent. Here we follow the taxonomy in Ertter et al. (2014). In the park we recorded eight species. *Potentilla arenosa* is characterized by petioles with long, minutely bumpy hairs and no short, fine curly hairs, and multiple-flowered inflorescences. Subspecies *arenosa* has petioles with abundant short stiff crinkly hairs, whereas subspecies *chamissonis* lacks these hairs.

**Habitat.** Sandy or gravelly river flats and terraces.

**Notes.** *Potentilla arenosa* subsp. *arenosa* is rare in the park, recorded at only a few sites.

***Potentilla arenosa* subsp. *chamissonis* (Hultén) Elven & D.F.Murray**
Chamisso's cinquefoil – potentille de Chamisso
Figure 72B, C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 21.5, *Gillespie et al. 12427* (CAN 10116614).

**Identification.** Tufted herbs 10–25 cm tall. Leaves mostly clustered at base, palmately divided, leaflets 3, toothed; petioles with long verrucose hairs, lacking both short crinkly hairs and short, fine curly hairs; blades whitish below with dense short hairs. Flowering stems with 1–2 leaves, usually branched, (1)2–7-flowered. Flowers: petals 5, yellow, 4–7 mm long and wide, narrowed at base, broadly 2-lobed at apex.

**Figure 72. A.** *Potentilla arenosa* subsp. *arenosa*, habit. *Sokoloff & McMullin 798*, Ellesmere Island, Nunavut. **B–C.** *Potentilla arenosa* subsp. *chamissonis*. **B.** Habit. **C.** Flowers. *Gillespie et al. 12427*. **D–E.** *Potentilla hyparctica* subsp. *hyparctica*. **D.** Habit. **E.** Flowers. *Gillespie et al. 11739*. **F–G.** *Potentilla nivea*. **F.** Flowers. **G.** Habit. Tuktut Nogait National Park, Northwest Territories, July 6, 2009. Photos by P.C. Sokoloff (A), L.J. Gillespie (B–E) and R.D. Bull (F–G).

See *P. arenosa* subsp. *arenosa.* for the differences between the two subspecies.

**Habitat.** Sandy or gravelly river flats and terraces.

**Notes.** *Potentilla arenosa* subsp. *chaissonis* is rare in the park, recorded at only one site.

***Potentilla hyparctica* Malte subsp. *hyparctica***
Arctic cinquefoil – petite potentille arctique
Figure 72D, E

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Dansereau 500722-0259* (MT 00287258), *Dansereau 500722-0259* (MT 00287257), *Dansereau 500722-0388* (MT 00287259); site 22.1, *Gillespie et al. 11461* (CAN 10116627) • Barnes Plateau S: site 31.5, *Gillespie et al. 11764* (CAN 10116617); site GL-22, *Raynolds & Bültmann MKR-2022-47* (CAN 10169252) • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11792* (CAN 10116625); site 5.3, *Gillespie et al. 11861* (CAN 10116624) • Kangiqtualuk Uqquqti: site 28.4, *Gillespie et al. 11662* (CAN 10116620) • Kuugaaluk: site 16.5, *Gillespie et al. 12213* (CAN 10116623); site 19.1, *Gillespie et al. 12288* (CAN 10116619); site 19.3, *Gillespie et al. 12299* (CAN 10116618) • Marble Lake: site 31.1, *Gillespie et al. 11739* (CAN 10116622) • Ravenscraig Harbour: site RH-1, *Dare 33* (CAN 10092684), *Dare 35* (CAN 10092687) • Refuge Harbour: site 11.2, *Gillespie et al. 12023* (CAN 10116626); site 11.3, *Gillespie et al. 12027* (CAN 10116616) • Tingijattut: site 15.6, *Gillespie et al. 12170* (CAN 10116621).

**Identification.** Tufted herbs 3–15 cm tall. Leaves mostly clustered at base, palmately divided, leaflets 3, toothed; blades pale green below, with scattered long hairs and no short curly white hairs. Flowering stems with 0–2 leaves, usually branched, 1–3-flowered. Flowers: petals 5, yellow, 4–9 mm long and wide, narrowed at base, broadly 2-lobed at apex.

*Potentilla hyparctica* is a distinctive, widespread species, characterized by leaves that are pale green below with scattered long hairs, but no short white hairs, and inflorescences with 1–3 flowers. All other species with palmately divided leaves in the park have leaf blades that are whitish below, with dense short hairs.

**Habitat.** Dry, sandy or gravelly tundra, rocky slopes, patterned ground.

***Potentilla nivea* L.**
Snow cinquefoil – potentille des neiges
Figure 72F, G

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tasialuk S: site 26.5, *Gillespie et al. 11591* (CAN 10116663).

**Identification.** Tufted herbs 5–15 cm tall. Leaves mostly clustered at base, palmately divided, leaflets usually 3, toothed; petioles with dense short curly hairs and no or few long hairs; blades whitish below with dense hairs. Flowering stems with 0–1 leaf, usually branched, 1–5-flowered. Flowers: petals 5, yellow, 4–8 mm long and wide, narrowed at base, broadly 2-lobed at apex.

*Potentilla nivea* is most similar to *P. arenosa*, but differs in its petioles with dense short curly hairs and no or few long hairs.

**Habitat.** Dry, sandy or gravelly tundra, rocky slopes, patterned ground.

**Notes.** This species was collected only once in the park, on a flat stony polygon-patterned terrace in the long valley south of Tasialuk.

***Potentilla pulchella* R.Br.**
Pretty cinquefoil – potentille jolie
Figure 73A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.1, *Gillespie et al. 11904* (CAN 10116665).

**Identification.** Tufted herbs 2–15 cm tall, hairy. Leaves mostly clustered at base, pinnately or subpalmately divided, leaflets usually 5, 2 lateral and 3 terminal, toothed. Flowering stems with 1–2 leaves, branched, 2–7-flowered. Flowers: petals 5, yellow, 4–5 mm long, narrowed at base, broadly 2-lobed at apex.

This distinctive species is pale grey-green in colour, with pinnately divided leaves, the lower leaflet pair separated from the three terminal ones, and small flowers.

**Habitat.** Dry sandy and stony river terraces and banks.

**Notes.** *Potentilla pulchella* is rare in the park, collected only once at the head of Kangiqtualuk Agguqti, on a flat stony-sand terrace adjacent to a large delta.

**Figure 73. A–B.** *Potentilla pulchella*. **A.** Habit. *Sokoloff & McMullin 666*. Eureka, Ellesmere Island, Nunavut. **B.** Flowers. *Sokoloff & McMullin 805*. Lake Hazen, Ellesmere Island, Nunavut. **C.** *Potentilla subgorodkovii*, habit. *Gillespie et al. 12382*. **D.** *Potentilla subvahliana*, leaves and flower detail. *Gillespie et al. 12398*. **E–F.** *Potentilla vahliana*. **E.** Habit. *Gillespie et al. 12164*. **F.** Habit. *Gillespie et al. 12131*. Photos by P.C. Sokoloff (A–B) and L.J. Gillespie (C–F).

***Potentilla subgorodkovii* Jurtzev**
Sheenjek River cinquefoil – potentille de Jurtzev
Figure 73C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.2, *Gillespie et al. 11936* (CAN 10116564); site 21.1, *Gillespie et al. 12413* (CAN 10116563); site 21.8, *Gillespie et al. 12432* (CAN 10116562).

**Identification.** Densely tufted herbs 3–15 cm tall. Leaves mostly clustered at base, palmately divided, leaflets 3, toothed; petioles with long hairs and very short wavy hairs. Flowering stems usually with 1 leaf, usually unbranched, 1(or 2)-flowered. Flowers: epicalyx bracts narrower than sepals; petals 5, yellow, 6–9 mm long and wide, narrowed at base, broadly 2-lobed at apex.

*Potentilla subgorodkovii*, *P. subvahliana*, and *P. vahliana* are closely related, sharing inflorescences that are typically 1-flowered and stem bases that are usually densely covered in persistent old leaves. *Potentilla subgorodkovii* is distinguished by its narrow epicalyx bracts and petioles with both long hairs and very short wavy hairs.

**Habitat.** Dry tundra, rocky and gravelly slopes and ridges.

**Notes.** *Potentilla subgorodkovii* was recorded only on rocky slopes at three sites in the large valley at the head of Kangiqtualuk Agguqti.

***Potentilla subvahliana* Jurtzev**
High Arctic cinquefoil – potentille subvahlienne
Figure 73D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GE-1, *Dansereau*

*500811-0854* (MT 00287115) • Gibbs Esker: site 20.12, *Gillespie et al. 12398* (CAN 10116745), *Gillespie et al. 12401* (CAN 10116746) • Kangiqtualuk Agguqti: site 3.5, *Gillespie et al. 11846* (CAN 10116743); site 8.2, *Gillespie et al. 11947* (CAN 10116744) • Marble Lake: site 31.2, *Gillespie et al. 11743* (CAN 10116742).

**Identification.** Tufted cushion-forming herbs 3–10 cm tall. Leaves mostly clustered at base, palmately divided, leaflets 3, toothed; petioles with only long hairs (short wavy hairs absent). Flowering stems usually with 1 leaf, usually unbranched, 1(or 2)-flowered. Flowers: epicalyx bracts narrower than sepals; petals 5, yellow, 4–8 mm long and wide, narrowed at base, broadly 2-lobed at apex.

This species is characterized by small flowers, narrow epicalyx bracts, and petioles with only long straight hairs and no short wavy hairs.

**Habitat.** Dry rocky and gravelly slopes, eskers.

**Notes.** *Potentilla subvahliana* was recorded from three localities on the Barnes Plateau, and on dry rocky slopes in the large valley at the head of Kangiqtualuk Agguqti.

***Potentilla vahliana* Lehm.**
Vahl's cinquefoil – potentille de Vahl
Figure 73E, F

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Dansereau 500722-0388* (MT 00287224); site 23.6, *Gillespie et al. 11521* (CAN 10121697) • Clark Fiord: site 20.1, *Gillespie et al. 12339* (CAN 10121702); site 20.7, *Gillespie et al. 12370a* (CAN 10121693) • Gibbs Fiord: site 20.9, *Gillespie et al. 12377* (CAN 10121694), *Gillespie et al. 12382* (CAN 10121703) • Kangiqtualuk Uqquqti: site 28.4, *Gillespie et al. 11658* (CAN 10121695) • Stewart Valley: site 15.1, *Gillespie et al. 12122* (CAN 10121698) • Tasialuk S: site 26.5, *Gillespie et al. 11588* (CAN 10121696) • Tingijattut: site 15.2, *Gillespie et al. 12131* (CAN 10121699); site 15.4, *Gillespie et al. 12154* (CAN 10121700), *Gillespie et al. 12164* (CAN 10121701).

**Identification.** Tufted herbs 3–15 cm tall. Leaves mostly clustered at base, palmately divided, leaflets 3, toothed; petioles with both long and short wavy hairs. Flowering stems with 0–1 leaves, usually unbranched, 1(or 2)-flowered. Flowers: epicalyx bracts as wide as sepals; petals 5, yellow, 8–10 mm long and wide, narrowed at base, broadly 2-lobed at apex.

This species has petioles with both long and short hairs, epicalyx bracts that are as wide as the sepals, and large flowers (petals 8–10 mm long).

**Habitat.** Dry tundra, rocky and gravelly ridges and slopes, eskers.

**Notes.** *Potentilla vahliana* is fairly widespread in the Fiord and Mountain zone, but absent from the other two zones.

**Salicaceae**

***Salix arctica* Pall.**
Arctic willow – saule arctique – suputiit (Burt et al. 2010); suputit, suputiksaliit, uqaujait (Mallory and Aiken 2012); uqaujaq (Blondeau et al. 2011)
Figure 74A–D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.1, *Gillespie et al. 11469* (CAN 10116594) • Barnes Plateau S: site GL-20, *Raynolds & Bültmann MKR-2022-45* (CAN 10169259) • Clark Fiord: site 20.1, *Gillespie et al. 12327* (CAN 10116600); site 20.3 *Gillespie et al. 12362* (CAN 10116585) • Gibbs Fiord: site 20.9, *Gillespie et al. 12379* (CAN 10123191) • Kangiqtualuk Agguqti: site 3.2, *Gillespie et al. 11830* (CAN 10116595), *Gillespie et al. 11831* (CAN 10116596); site 6.2, *Gillespie et al. 11880* (CAN 10116597); site 8.1, *Gillespie et al. 11907* (CAN 10116598), *Gillespie et al. 11912* (CAN 10116589) • Kangiqtualuk Uqquqti: site 28.2, *Gillespie et al. 11645* (CAN 10116592), *Gillespie et al. 11646* (CAN 10116593) • Ravenscraig Harbour: site RH-1, *Dare 6* (CAN 10092817), *Dare 9* (CAN 10092818), *Dare 17* (CAN 10092816), *Dare 18* (CAN 10092819) • Refuge Harbour: site 11.1, *Gillespie et al. 12011* (CAN 10116590); site 11.3, *Gillespie et al. 12028* (CAN 10116599) • Stewart Valley: site 15.1, *Gillespie et al. 12114* (CAN 10116586) • Tasialuk N: site 26.1, *Gillespie et al. 11575* (CAN 10116591) • Tingijattut: site TG-2, *Dare et al. 87* (CAN 10092824); site 15.2, *Gillespie et al. 12133* (CAN 10116587).

**Identification.** Dwarf spreading shrubs 3–15 cm tall, to 3 m wide. Leaf blades narrowly elliptic, 4–7 cm long, untoothed, white-hairy. Female catkins dull reddish or pinkish. Capsules finely hairy; seeds numerous, small, each with a coma, a tuft of long white downy hairs (typical for genus).

**Habitat.** Wet to dry tundra, meadows, river terraces.

**Notes.** This is the most common willow in the park and was found in all three zones. We found a population at the mouth of Kuugaaluk (*Gillespie et al. 12195* CAN 10116588, site 16.1) that appeared to be hybrids with

**Figure 74. A–D.** *Salix arctica*. **A.** Habitat. **B.** Habit (pistillate), *Gillespie et al. 11830*. **C.** Habit (staminate). *Gillespie et al. 11831*. **D.** Habit (dispersing seeds). *Gillespie et al. 12327*. **E–F.** *Salix herbacea*. **E.** Habitat. Vicinity of Tasialuk, July 26, 2021. **F.** Pistillate plant (left). *Gillespie et al. 11798*. Staminate plant (right). *Gillespie et al. 11797*. **G–H.** *Salix reticulata*. **G.** Habit. *Gillespie et al. 11819*. **H.** Staminate plant (left). *Gillespie et al. 11819*. Pistillate plant (right). *Gillespie et al. 11818*. Photos by L.J. Gillespie (A–C, E–H) and G.A. Levin (D).

*Salix arctophila* Cockerell ex A.Heller (northern willow) because they had toothed leaves but otherwise resembled *S. arctica*. This suggests that *S. arctophila* also occurs in the park, although we did not find it.

**Inuit Qaujimajatuqangit.** The leaves of this species are eaten, and the inner bark and root can be chewed to relieve pain (Burt et al. 2010; Davis and Banack 2012, *Salix* spp.; Mallory and Aiken 2012). The fluff on the seeds was used to make wicks for oil lamps (qulliq) (Burt et al. 2010; Mallory and Aiken 2012), as a wound dressing, to start fires, and as a diarrhea treatment (Burt et al. 2010). Branches can be used as firewood and as tools for tending the qulliq (Burt et al. 2010).

***Salix herbacea* L.**

Snowbed willow – saule herbacé – quarait (Mallory and Aiken 2012); qupirrulik, uqaujaq (Blondeau et al. 2011)

Figure 74E, F

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.1, *Gillespie et al. 11470* (CAN 10121677), *Gillespie et al. 11471* (CAN 10116749) • Barnes Plateau S: site GL-20, *Raynolds & Bültmann MKR-2022-60* (CAN 1016957) • Clark Fiord: site 20.2, *Gillespie et al. 12359* (CAN 10121674) • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11797* (CAN 10121666), *Gillespie et al. 11798* (CAN 10121667); site 8.8, *Gillespie et al. 11989* (CAN 10121668); site 21.1, *Gillespie et al. 12412* (CAN 10121675) • Kangiqtualuk Uqquqti: site 28.3, *Gillespie et al. 11651* (CAN 10116750), *Gillespie et al. 11652* (CAN 10121665) • Kuugaaluk: site 16.2, *Gillespie et al. 12200* (CAN 10121673); site 16.5, *Gillespie et al. 12212* (CAN 10121670); site 16.6, *Gillespie et al. 12220* (CAN 10121671); site A22.3, *Gillespie et al. 12459* (CAN 10121676) • Ravenscraig Harbour: site RH-1, *Dare 7* (CAN 10092788), *Dare 25* (CAN 10092790) • Refuge Harbour: site 11.4, *Gillespie et al. 12035* (CAN 10121669) • Tingijattut: site 15.2, *Gillespie et al. 12129* (CAN 10121672).

**Identification.** Tiny creeping shrubs 1–5 cm tall. Leaf blades 0.5–1.5 cm long, glabrous. Catkins very small, reddish, with few flowers. Capsules shiny, dark red, glabrous.

**Habitat.** Moist to wet tundra, snowbeds, moist to wet sandy areas.

**Notes.** Snowbed willow is common in vegetated wet areas throughout the park. Leaves turn red and orange in late summer. The sand slope above the lagoon at the Kuugaaluk mouth was densely covered in this species and formed a spectacular fall display (Figure 2F, foreground).

**Inuit Qaujimajatuqangit.** None reported for Nunavut. In Nunavik leaves are reported to be eaten (Blondeau et al. 2011).

***Salix reticulata* L.**
Net-veined willow – saule réticulé – quarait (Black et al. 2008); alagsaujut (Mallory and Aiken 2012); uqaujaq (Blondeau et al. 2011)
Figure 74G, H

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.2, *Gillespie et al. 11489* (CAN 10121678), *Gillespie et al. 11490* (CAN 10121685) • Clark Fiord: site 20.2, *Gillespie et al. 12360* (CAN 10121691) • Kangiqtualuk Agguqti: site 3.2, *Gillespie et al. 11818* (CAN 10121679), *Gillespie et al. 11819* (CAN 10121680); site 21.9, *Gillespie et al. 12434* (CAN 10121692); site 8.2, *Gillespie et al. 11949a* (CAN 10121681), *Gillespie et al. 11949b* (CAN 10121682) • Kangiqtualuk Uqquqti: site 28.6, *Gillespie et al. 11670* (CAN 10121686), *Gillespie et al. 11671* (CAN 10121687) • Refuge Harbour: site 12.5, *Gillespie et al. 12051* (CAN 10121690) • Remote Lake: site RL-1, *Philpot et al. s.n.* (COLO 1625250) • Tingijattut: site TG-2, *Dare et al. 86* (CAN 10092823); site 15.2, *Gillespie et al. 12140* (CAN 10121683), *Gillespie et al. 12141* (CAN 10121684).

**Identification.** Dwarf spreading shrubs 3–10 cm tall. Leaves circular or broadly elliptic, 1.5–4 cm long, with distinctive reticulate venation, glabrous. Female catkins dark reddish, male ones yellowish pink. Capsules glabrous.

This willow species is easily recognized due to its conspicuous reticulate leaf venation.

**Habitat.** Moist tundra, sedge meadows, snowbeds.

***Salix richardsonii* Hook.**
Richardson's willow – saule de Richardson
Figure 75

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GL-20, *Bültmann & Raynolds MKR-2022-50* (CAN 10169263) • Kangiqtualuk Agguqti: site 3.2, *Gillespie et al. 11820* (CAN 10116572); site 3.4, *Gillespie et al. 11842* (CAN 10116571); site 8.2, *Gillespie et al. 11951* (CAN 10116570); site 21.1, *Gillespie et al. 12407* (CAN 10116567) • Kangiqtualuk Uqquqti: site 27.1, *Gillespie et al. 11606* (CAN 10116565), *Gillespie et al. 11607* (CAN 10116573); site 28.7, *Gillespie et al. 11678* (CAN 10116569) • Tasialuk S: site 26.6, *Gillespie et al. 11604* (CAN 10116566) • Tingijattut: site 15.8, *Gillespie et al. 12175* (CAN 10116568).

**Identification.** Erect shrubs 0.2–1.5 m tall, with thick, gnarled, grey branches. Leaves elliptic to obovate, 2.5–10 cm long, with some long hairs, especially when young. Catkins developing before the leaves. Capsules glabrous.

**Figure 75.** *Salix richardsonii*. **A.** Habitat. *Gillespie et al. 12407*. **B.** Habit. Valley at head of Kangiqtualuk Agguqti, August 8, 2021. **C.** Pistillate catkins. *Gillespie et al. 11606*. **D.** Staminate catkins. *Gillespie et al. 11607*. Photos by L.J. Gillespie.

**Habitat.** Sedge meadows, riverbanks, lakeshores.

**Notes.** *Salix richardsonii* is the largest shrub known from the park. It was recorded in inland valleys in the Fiord and Mountain zone, where it was sometimes locally common in moist to wet sheltered areas (Figure 5G, 6C). It was also found at two sites on the Barnes Plateau, including at Marble Lake (photo voucher), where several small plants were observed in a wet moss-sedge meadow. Shrubs were largest in the valleys at the heads of Kangiqtualuk Agguqti and Kangiqtualuk Uqquqti, where they reached a height of about 1.5 m (Figure 6C).

**Inuit Qaujimajatuqangit.** None recorded in Nunavut, but the seed comas possibly were gathered to use in oil lamp wicks, as in other species of *Salix*.

**Saxifragaceae**

***Micranthes foliolosa* (R.Br.) Gornall**
Syn.: *Saxifraga foliolosa* R.Br.
Leafy saxifrage – saxifrage à bulbilles – mirquujaliit (Mallory and Aiken 2012)
Figure 76A–C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.3, *Gillespie et al. 11498* (CAN 10116546); site 24.2, *Gillespie et al. 11545* (CAN 10116545) • Barnes Plateau S: site 31.4, *Gillespie et al. 11746* (CAN 10116544); site GL-14, *Raynolds & Bültmann MKR-2022-28* (CAN 10169291) • Clark Fiord: site 20.2, *Gillespie et al. 12358* (CAN 10116550) • Kangiqtualuk Agguqti: site 3.2, *Gillespie et al. 11824* (CAN 10116547) • Kuugaaluk: site 16.3, *Gillespie et al. 12206* (CAN 10116542); site 16.8, *Gillespie et al. 12226* (CAN

**Figure 76. A–C.** *Micranthes foliolosa*. **A.** Habit. **B.** Terminal flower. *Gillespie et al. 12315*. **C.** Habit, viviparous specimen. *Gillespie et al. 12226*. **D–E.** *Micranthes nivalis*. **D.** Inflorescence. *Gillespie et al 12031*. **E.** Habit. *Gillespie et al. 11863*. **F.** *Micranthes tenuis*, habit. *Gillespie et al. 11868*. Photos by P.C. Sokoloff (A–B, D–E) and L.J. Gillespie (C, F).

10116541); site 19.4, *Gillespie et al. 12315* (CAN 10116549) • Refuge Harbour: site 11.2, *Gillespie et al. 12019* (CAN 10116543) • Tasialuk N: site 26.4, *Gillespie et al. 11584* (CAN 10116548).

**Identification.** Tufted plants to about 15 cm tall. Leaves all in basal rosette, blade usually sharp-toothed near apex. Flowering stem leafless, usually with 1 terminal flower, sometimes flowers absent or several, and several dense clusters of small bulbils along the stem. Petals white with 1–2 yellow spots near base, 3–8 mm long; anthers and ovary dark pink.

*Micranthes foliolosa* differs from the other two *Micranthes* species in the park in its few-toothed leaves, bulbils replacing most flowers, and longer, yellow-spotted petals.

**Habitat.** Sedge meadows, wet tundra, lakeshores, pond margins, streambanks.

**Notes.** *Micranthes foliolosa* is an early colonizer of the bare wet recently deglaciated zone adjacent to the Barnes Ice Cap, and was one of only three vascular plants observed here.

***Micranthes nivalis* (L.) Small**
Syn.: *Saxifraga nivalis* L.
Snow saxifrage – saxifrage des neiges
Figure 76D, E

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Arviqtujuq Kangiqtua NW: site 18.4, *Gillespie et al. 12277* (CAN 10121721) • Atagulisaktalik: site 23.11, *Gillespie et al. 11538* (CAN 10121716) • Barnes Plateau S: site GL-18, *Raynolds & Bültmann MKR-2022-37* (CAN 10169264) • Clark Fiord: site 20.2, *Gillespie et al. 12361* (CAN 10121726) • Kangiqtualuk Agguqti: site 5.3, *Gillespie et al. 11863* (CAN 10121717); site 8.2, *Gillespie et al. 11914* (CAN 10121718); site 21.4, *Gillespie et al. 12423* (CAN 10121722) • Kangiqtualuk Uqquqti: site 28.2, *Gillespie et al. 11647* (CAN 10121724) • Refuge Harbour: site 11.3, *Gillespie et al. 12031* (CAN 10121720) • Stewart Valley: site 15.1, *Gillespie et al. 12112* (CAN 10121719) • Tasialuk S: site 26.6, *Gillespie et al. 11597* (CAN 10121725) • Tingijattut: site 15.4, *Gillespie et al. 12160* (CAN 10121727).

**Identification.** Tufted plants 5–15 cm tall. Leaves all in basal rosette, blade toothed on distal ⅔. Flowering stems 1–2.5 mm wide, leafless, with conspicuous white hairs. Inflorescence with 1(or 2) dense clusters of numerous flowers. Petals 5, white, sometimes tinged pink, unspotted, 2–4 mm long.

*Micranthes nivalis* is taller with thicker stems that are more densely and conspicuously white hairy and with more numerous flowers in denser clusters than the similar *M. tenuis* (Healy & Gillespie 2004). It also prefers drier sites, but does range into moister sites, where it can sometimes be found growing with *M. tenuis*.

**Habitat.** Dry to moist rocky slopes and ridges.

***Micranthes tenuis* (Wahlenb.) Small**
Syn.: *Saxifraga tenuis* (Wahlenb.) Harry Sm.
Slender saxifrage – saxifrage ténue
Figure 76F

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 5.4, *Gillespie et al. 11868* (CAN 10116748) • Kangiqtualuk Uqquqti: site 28.1, *Gillespie et al. 11638* (CAN 10116747).

**Identification.** Tufted plants 2–9 cm tall. Leaves all in basal rosette, blade toothed distally. Flowering stems to 1 mm wide, leafless, with sparse, inconspicuous hairs. Inflorescence a loose cluster of 2–10 flowers. Petals 5, white, usually tinged pink or purplish, unspotted, 2–3 mm long.

*Micranthes tenuis* is a shorter, more slender plant with fewer flowers in a more open branched inflorescence than *M. nivalis*.

**Habitat.** Wet, mossy lakeshores and streambanks, seeps on rock outcrops

***Saxifraga aizoides* L.**
Yellow mountain saxifrage – saxifrage jaune
Figure 77A–C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.5, *Gillespie et al. 11963* (CAN 10116632) • Kangiqtualuk Uqquqti: site 27.1, *Gillespie et al. 11709* (CAN 10116631).

**Identification.** Low, mat-forming plants 2–10 cm tall. Leaves narrow, unlobed, fleshy. Flowers several per stem; petals 5, yellow, often with orange spots, 3–7 mm long.

**Habitat.** Moist depressions, pond margins, seeps.

**Notes.** *Saxifraga aizoides* can be locally common and very showy when in flower. We recorded populations at only two sites (Figure 6D); it prefers calcareous substrates, which are uncommon in the park.

**Figure 77. A–C.** *Saxifraga aizoides*. **A.** Habitat. **B.** Habit. **C.** Flowers. *Gillespie et al. 11963*. **D–E.** *Saxifraga cernua*. **D.** Habitat. **E.** Flowers and red bulbils. *Gillespie et al. 11777*. **F–G.** *Saxifraga cespitosa* subsp. *cespitosa*. **F.** Habit. **G.** Flowers. *Gillespie et al. 11510*. Photos by L.J. Gillespie (A–E) and P.C. Sokoloff (F–G).

***Saxifraga cernua* L.**
Nodding saxifrage – saxifrage penchée – nunaraq qupanuap niqinga (Mallory and Aiken 2012)
Figure 77D, E

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.2, *Gillespie et al. 11483* (CAN 10121779) • Barnes Plateau S: site 31.4, *Gillespie et al. 11753* (CAN 10121781); site GL-14, *Raynolds & Bültmann MKR-2022-57* (CAN 10169292) • Kangiqtualuk Agguqti: site 5.3, *Gillespie et al. 11864* (CAN 10121783); site 8.2, *Gillespie et al. 11945* (CAN 10121784) • Kangiqtualuk Uqquqti: site 28.4, *Gillespie et al. 11659* (CAN 10121780); site 31.10, *Gillespie et al. 11777* (CAN 10121782) • Kuugaaluk: site 19.4, *Gillespie et al. 12316* (CAN 10121788) • Refuge Harbour: site 12.5, *Gillespie et al. 12052* (CAN 10121785); site 14.2, *Gillespie et al. 12094* (CAN 10121786) • Tasialuk S: site 21.12, *Gillespie et al. 12441* (CAN 10121789) • Tingijattut: site 15.4, *Gillespie et al. 12163* (CAN 10121787).

**Identification.** Herbs to 30 cm tall, sometimes forming clumps. Leaves in basal rosette and cauline, 3–5 lobed. Flowering stems with numerous small, red bulbils and usually 1 terminal flower (sometimes absent). Petals 5, white, often with green stripes near the base, 6–12 mm long.

**Habitat.** Wet places among rocks, rock ledges and cracks, along streams.

**Notes.** This species is common in wet, often shady, places throughout the park. At the Barnes Ice Cap site it was found it wet rocky tundra barrens.

***Saxifraga cespitosa* L. subsp. *cespitosa***
Tufted saxifrage – saxifrage cespiteuse
Figure 77F, G

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 23.3 *Gillespie et al. 11510*

(CAN 10121714) • Gibbs Esker: site 20.12, *Gillespie et al. 12394* (CAN 10121711) • Kangiqtualuk Agguqti: site 8.2, *Gillespie et al. 11938* (CAN 10121712) • Kangiqtualuk Uqquqti: site 28.3, *Gillespie et al. 11649* (CAN 10121713).

**Identification.** Cespitose herbs with many flowering stems, to 20 cm tall. Leaves 3(or 5)-lobed, soft, without prickly teeth. Flowers 2–5 per stem; petals 5, white, sometimes with greenish stripes near the base, 3–7 mm long.

**Habitat.** Rocky or gravelly sites.

**Notes.** Uncommon in rocky places, recorded at five sites in the park (including Tingijattut, photo voucher).

***Saxifraga hyperborea* R.Br.**
Pygmy saxifrage – saxifrage hyperboréale
Figure 78A

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.3, *Gillespie et al. 11493* (CAN 10122140); site 24.2, *Gillespie et al. 11548* (CAN 10122142) • Barnes Plateau S: site GL-19, *Raynolds & Bültmann MKR-2022-35* (CAN 10169283) • Kangiqtualuk Uqquqti: site 30.5, *Gillespie et al. 11728* (CAN 10122141)

**Identification.** Herbs 1–5 cm tall, forming small clumps, often purplish, not rhizomatous. Leaves basal and cauline, 3–5-lobed. Flowers 1–5 per stem; hypanthium sparsely to densely long stipitate-glandular; petals 5, white, 2–3.5 mm long, to 1.5 times as long as sepals.

This species can sometimes be difficult to distinguish from *S. rivularis*, especially subspecies

**Figure 78. A.** *Saxifraga hyperborea*, habit. *Gillespie et al. 11548*. **B–C.** *Saxifraga oppositifolia* subsp. *oppositifolia*. **B.** Habitat. **C.** Flowers. *Gillespie et al. 11741*. **D–E.** *Saxifraga rivularis* subsp. *arctolitoralis*. **D.** Habit. **E.** Flower. *Gillespie et al. 11888*. **F.** *Saxifraga rivularis* subsp. *rivularis*, flowers. *Gillespie et al. 12229*. **G–H.** *Saxifraga tricuspidata*. **G.** Habitat. Valley south of Tingijattut, August 15, 2021. **H.** Flowers. *Gillespie et al. 11609*. Photos by L.J. Gillespie.

*arctolitoralis*, and they can sometimes be found growing together. *Saxifraga hyperborea* lacks stolons, whereas *S. rivularis* has stolons, but they often break off when plants are removed from the soil.

**Habitat.** Wet mossy depressions and streambanks, wet stony-sand river flats, snowbeds, wet seashores.

***Saxifraga oppositifolia* L. subsp. *oppositifolia***
Purple mountain saxifrage – saxifrage à feuilles opposées – aupilattunnguat (Mallory and Aiken 2012)
Figure 78B, C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.3, *Gillespie et al. 11497* (CAN 10116584) • Barnes Plateau S: site GL-18, *Raynolds & Bültmann MKR-2022-36* (CAN 10169286) • Clark Fiord: site 20.1, *Gillespie et al. 12337* (CAN 10116579), *Gillespie et al. 12346* (CAN 10116580) • Gibbs Esker: site 20.12, *Gillespie et al. 12397* (CAN 10116574) • Kangiqtualuk Agguqti: site 3.2, *Gillespie et al. 11823* (CAN 10116575); site 8.1, *Gillespie et al. 11909* (CAN 10116578) • Kangiqtualuk Uqquqti: site 28.1, *Gillespie et al. 11629* (CAN 10116577) • Marble Lake: site 31.2, *Gillespie et al. 11741* (CAN 10116576) • Refuge Harbour: site 11.2, *Gillespie et al. 12022* (CAN 10116582) • Tingijattut: site 15.4, *Gillespie et al. 12158* (CAN 10116583).

**Identification.** Matted herbs to 5 cm tall, forming small to large flat clumps. Leaves opposite, densely overlapping, scale-like, leathery, margins with stiff hairs. Flowers 1 per stem; petals 5, pinkish purple, 6–9 mm long.

**Habitat.** Dry to moist, rocky tundra, rocky sedge meadows, sometimes sandy and gravelly river terraces.

**Notes.** A common species with showy flowers, *S. oppositifolia* is the territorial flower of Nunavut.

**Inuit Qaujimajatuqangit.** The flowers are edible and are good when eaten with blubber (Ootoova et al. 2001).

***Saxifraga rivularis* L. subsp. *arctolitoralis* (Jurtzev & V.V.Petrovsky) M.H.Jørg. & Elven**
Arctic seashore saxifrage – saxifrage du littoral arctique
Figure 78D, E

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site 31.4, *Gillespie et al. 11747* (CAN 10122143) • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11793* (CAN 10122144); site 6.3, *Gillespie et al. 11888* (CAN 10122145) • Refuge Harbour: site 11.3, *Gillespie et al. 12032* (CAN 10122139).

**Identification.** Herbs 2–3 cm tall, forming small clumps, with stolons; hairs with deep purple crosswalls. Leaves basal and cauline, 3–5-lobed. Flowers 1–5 per stem; hypanthium densely long stipitate-glandular; petals 5, white, 3–6 mm long, 2–3 times as long as sepals.

*Saxifraga rivularis* may be distinguished from *S. hyperborea* by the presence of stolons and longer petals that are 2–3 times as long as the sepals. Unfortunately, stolons are fragile and may not be present on herbarium specimens. Subspecies *arctolitoralis* is shorter, usually purplish throughout, and has hairs with deep purple crosswalls and long hairs on the hypanthium, whereas subspecies *rivularis* usually is taller, green throughout, and has hairs with clear or rarely pale purple crosswalls and short hypanthium hairs.

**Habitat.** Wet seashores, wet silty or clay ground.

**Notes.** *Saxifraga rivularis* subsp. *arctolitoralis* was one of only three vascular plant species found growing in the recently deglaciated zone adjacent to the Barnes Ice Cap (Figure 7B).

***Saxifraga rivularis* L. subsp. *rivularis***
Alpine brook saxifrage – saxifrage des ruisseaux
Figure 78F

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 6.2, *Gillespie et al. 11879* (CAN 10122147) • Kuugaaluk: site 16.3, *Gillespie et al. 12207* (CAN 10122149); site 16.8, *Gillespie et al. 12229* (CAN 10122150) • Ravenscraig Harbour: site 18.6, *Gillespie et al. 12282* (CAN 10122148) • Tingijattut: site 15.9, *Gillespie et al. 12182* (CAN 10122146).

**Identification.** Herbs 2.5–7 cm tall, clump-forming, stolons; hairs with colourless, rarely pale purple, crosswalls. Leaves basal and cauline, 3–5-lobed. Flowers 1–5 per stem; hypanthium sparsely short stipitate-glandular; petals 5, white, 3–6 mm long, 2–3 times as long as the sepals.

*Saxifraga rivularis* subsp. *rivularis* is distinguished from *S. rivularis* subsp. *arctolitoralis* and *S. hyperborea* by its taller size, green colouration, and hypanthia with sparse, short, stipitate-glandular hairs.

**Habitat.** Wet mossy seeps and streambanks, snowbeds, wet seashores.

***Saxifraga tricuspidata* Rottb.**
Three-toothed saxifrage – saxifrage à trois dents – kakillarnat (Black et al. 2008); kakilarnaq (Burt et al. 2010); kakillarnat, tiinnguat, a'asaat (Mallory and Aiken 2012); kakagutik, kakillanaqutik, kapulanatuk (Blondeau et al. 2011; Clark 2012)
Figure 78G, H

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 23.3, *Gillespie et al. 11508* (CAN 10121790) • Clark Fiord: site 20.1, *Gillespie et al. 12324* (CAN 10122138) • Kangiqtualuk Agguqti: site 3.3, *Gillespie et al. 11837* (CAN 10122133); site 8.2, *Gillespie et al. 11937* (CAN 10122135) • Kangiqtualuk Uqquqti: site 27.1, *Gillespie et al. 11609* (CAN 10122132) • Refuge Harbour: site 14.1, *Gillespie et al. 12085* (CAN 10122134) • Stewart Valley: site 15.1, *Gillespie et al. 12117* (CAN 10122136) • Tingijattut: site TG-2, *Dare et al. 91* (CAN 10092866); site 15.5, *Gillespie et al. 12165* (CAN 10122137).

**Identification.** Herbs to 15 cm tall, forming large, green to reddish green clumps. Leaves prickly, mostly sharply 3 toothed, those on the stems sometimes just pointed at apex. Flowers several per stem.; petals 5, white with yellow and orange dots, 6–7 mm long.

**Habitat.** Dry sandy, gravelly, or rocky places.

**Notes.** This species is common in dry places, especially on slopes, ridges, and hill tops (Figure 4G), and also on dry stony river flats (Figure 5B, H) and coastal benches.

**Inuit Qaujimajatuqangit.** The leaves of this species are eaten, used to make tea, and applied to cuts (Black et al. 2008; Burt et al. 2010). The sweet flowers were eaten (Black et al. 2008; Burt et al. 2010; Clark 2012). It has been used as bedding for sled dog puppiesto toughen their feet (Burt et al. 2010; Mallory and Aiken 2012). Additionally, the leaves were placed next to dogs about to give birth to reduce the mother's bleeding (Burt et al. 2010).

**Bryophytes**
**Mosses**
**Amblystegiaceae**

***Pseudocalliergon turgescens* Loeske**
Syn.: *Scorpidium turgescens*
Turgid scorpion moss - pseudocalliergon turgescent

**Material examined:** CANADA – Nunavut • Agguttinnii TP • Kuugaaluk: site KM-2, *Miller B027* (COLO-B-0052671, det. WW as *Scorpidium turgescens*).

**Identification.** Plants prostrate, sparsely branched, large, turgid, golden yellow-brown, pleurocarpous. Stem hyalodermis absent. Leaves straight, ovate, strongly concave and imbricate, with apices apiculate and costa short and double, less than ½ of leaf length. Stem leaf alar cells quadrate with walls incrassate, in indistinct, triangular groups; laminal cells linear and smooth. Sexual condition dioicous.

**Substrate and habitat.** Open, wet, minerotrophic habitats such as fens and the edges of lakes and streams, on soil or rock.

**Notes.** The single collection known from the park of this easily identified species is a subfossil collection dated to 9880±200 years BP (Blake 1988). The species was collected in 1987 from Auyuittuq National Park on Baffin Island on the east coast to the south of Agguttinni TP (*Hines & Moore* CANM 302411). It is likely still present in Agguttinni NP, but this should be confirmed.

***Sanionia uncinata* (Hedw.) Loeske**
Sickle moss – faucillette à feuilles plissées

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GL-2, incidental taxon of *Bültmann & Raynolds s.n.* (CANM 10001063) • Tingijattut: site TG-1, incidental taxon of *Dare et al. 67* (CANM 10001072); site TG-2, *Doubt SOI2018-1* (CANM 10001081).

**Identification.** Plants green to yellow, shiny, branched, pleurocarpous, forming wefts or mats. Stem with differentiated hyalodermis, best seen in cross-section. Leaves narrowly and gradually acuminate, falcate-circinate and plicate, costa single, strong, often obscured by plications, margins finely serrulate near leaf apices. Alar cells differentiated, enlarged and lax transitioning abruptly to firm-walled, smaller supra-alar cells; laminal cells linear. Sexual condition autoicous. Capsules horizontal and curved.

**Substrate and habitat.** On soil, rock, or organic matter in a wide range of habitat types and moisture levels.

**Notes.** *Sanionia uncinata* is one of three *Sanionia* species in Nunavut, and the only one that is common and widespread throughout Canada.

**Inuit Qaujimajatuqangit.** Norton (2018) reported finding references to the use of *S. uncinata* for fire by Greenland Inuit.

**Andreaeaceae**

***Andreaea alpina* Hedw.**
Obovate rock moss – lanterne à feuilles obovées

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-1, *Doubt SOI2018-19* (CANM 10001099).

**Identification.** Plants forming red-brown to purple-black turfs that are difficult to remove as intact colonies when collecting, sometimes robust, to 10 cm tall, acrocarpous. Leaves spirally arranged, appressed when dry (when wet, leaf apices spreading from the somewhat sheathing, erect majority of the lamina), panduriform, straight, widest in distal half, ecostate, margins entire. Basal laminal cells rectangular, median laminal cells straight-walled; laminal papillae low or absent. Sexual condition autoicous. Capsules erect, opening along four slits in a style reminiscent of a lantern (as is characteristic for the genus); seta short.

**Substrate and habitat.** On rock that is periodically wet or damp with seepage or flowing water, particularly in late snow areas.

**Notes.** This taxon is treated in most major identification resources as *A. obovata* Thed., which was shown by Price and Ellis (2018) to be a junior synonym of *A. alpina*. The species that had been known as *A. alpina* is correctly called *A. hookeri* Schimp.

***Andreaea blyttii* Schimp.**
Blytt's rock moss - lanterne à pointe effilée

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Refuge Harbour: site 14.1, *Gillespie et al. 12092* (CANM 10000422).

**Identification.** Plants forming brown to blackish turfs that are difficult to remove as intact colonies when collecting, sometimes robust, to 10 cm tall, acrocarpous. Leaves spirally arranged, erect or secund, narrowly subulate, widest in proximal half, costae excurrent, distal leaf margins sometimes crenulate by projecting mammillae. Basal laminal cells rectangular, median laminal cells straight-walled. Sexual condition dioicous.

**Substrate and habitat.** On wet rock and mineral soil, especially in late snow areas.

**Notes.** Sporophytes are rare.

***Andreaea rupestris* Hedw.**
Black rock moss – lanterne des rochers

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-1, *Doubt SOI2018-14* (CANM 10001084).

**Identification.** Plants forming brownish, blackish or dark red-black turfs that are difficult to remove as intact colonies when collecting, to 3 cm tall, acrocarpous. Leaves spirally arranged, appressed when dry (commonly secund, sometimes spreading, when hydrated), lanceolate, widest in the proximal half, ecostate, margins entire. Basal laminal cells rectangular, median laminal cells straight-walled. Leaf cells papillose, papillae colourless and varying in size. Sexual condition autoicous. Capsules ovoid, erect.

In comparison with *A. alpina*, *A. rupestris* has leaves more commonly secund and asymmetric at the tips; leaves are also widest toward the leaf base, as opposed to the distally wider leaves of *A. alpina*.

**Substrate and habitat.** On rock, often in mesic to humid habitats.

**Aongstroemiaceae**

***Aongstroemia longipes* (Sommerf.) Bruch & Schimp.**
Sprig moss – branchette dressée
Figure 79

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site 31.4, *Gillespie et al. 11748* (CANM 10000441).

**Identification.** Shoots narrow, julaceous (worm-like), to 1 cm tall (or taller, if lower, non-living portions of

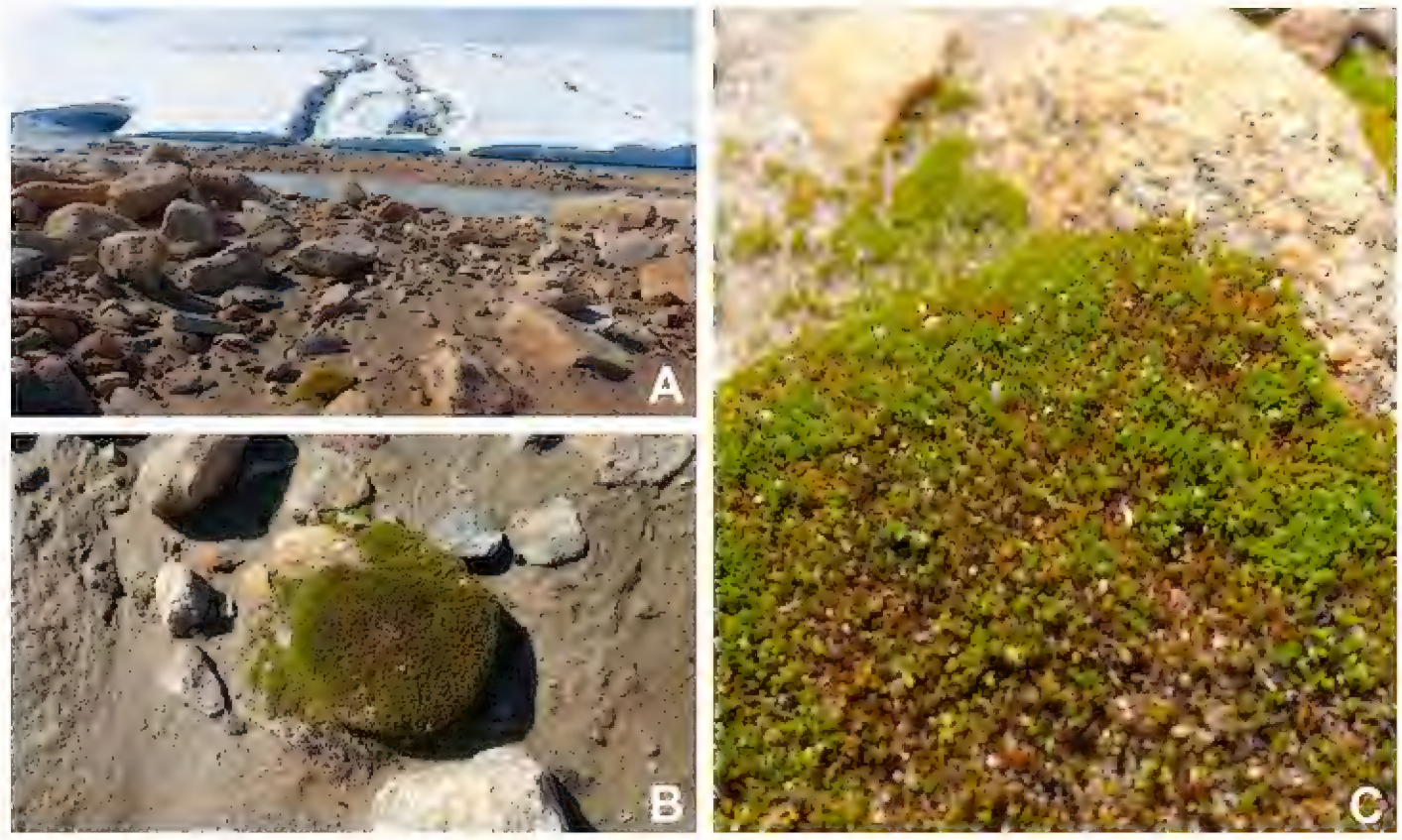


**Figure 79.** *Aongstroemia longipes*. **A.** Habitat. **B.** Habit. **C.** Leaf detail. *Gillespie et al. 11748*. Photos by L.J. Gillespie.

undecomposed material is included). Leaves concave, appressed, scale-like, costate. Sexual condition dioicous.

**Substrate and habitat.** Mineral substrates characteristic of disturbed, wet habitats. According to Atherton et al. (2010) substrates are at least moderately base-rich.

**Notes.** This distinctive species is rare in eastern North America and was not previously reported for Nunavut. In places where the substrate is active, a significant proportion of the plants may be under the surface.

### Aulacomniaceae

***Aulacomnium acuminatum* (Lindb. & Arnell) Kindb.**
Acutetip aulacomnium moss – aulacomnie acuminée

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Dansereau 500724-251* (NY 141942, det. GRB).

**Identification.** Plants robust (to 10 cm tall and 5 mm wide), bright yellowish green to light brown, acrocarpous. Stem rhizoids present but not continuously matted or especially conspicuous in the field. Leaves crowded, lanceolate, costa single and strong, margins entire, revolute from base almost to apex; leaf cells isodiametric, collenchymatous, unipapillose. Specialized asexual reproduction not recorded. Sexual condition dioicous.

This species, with its often sharp, gradually acuminate apices has been confused, in the field, with *Rhytidium* (which has rugose leaves) or abnormally large *Brachythecium*. Both latter species have very different leaf cell structure.

**Substrate and habitat.** On soil in moist, generally open sites, often in combination with other *Aulacomnium* species. Brassard (1971), working on Ellesmere Island, noted an association with *Cassiope tetragona*.

***Aulacomnium palustre* (Hedw.) Schwägr.**
Ribbed bog moss – aulacomnie des marais

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Dansereau 500724-251* (NY 154457, det. WCS), *Dansereau 500725-575* (NY 154456, det. WCS) • Ravenscraig Harbour: site RH-1, incidental taxon of *Dare 14* (CANM 10001071) • Tingijattut: site TG-1, *Dare et al. 71* (CANM 10001073); site TG-2, incidental taxon of *Doubt SOI2018-18* (CANM 10001098).

**Identification.** Plants often robust, to 10 cm tall, vivid light or yellow-green when hydrated and dull yellow-brown when dry, acrocarpous. Shoots narrowing to tips. Stems matted with dark brown rhizoids exceeding the leaves, except in youngest regions of the shoot. Leaves lanceolate, costa single and strong, margins serrulate; leaf cells each with single central papilla. Specialized asexual reproduction by tapered multi-cellular gemmae clustered densely at the ends of green stalks and spreading more sparsely below. Sexual condition dioicous.

This species can be recognized by its shoots that narrow to the tips, in contrast to the blunt, terete or julaceous shoot tips in the other *Aulacomnium* known from the park.

**Figure 80.** *Aulacomnium turgidum*. **A.** Habit (hydrated). **B.** Colony, in common habitat, Victoria Island, Nunavut. **C.** Shoots (dry), mixed with other tundra mosses, Salluit, Quebec. Photos by J. Doubt (A, B) and G. Rand (C).

**Substrate and habitat.** On soil, organic matter or rock, usually in moist to wet habitats such as fens, marshes, shores and seeps.

**Notes.** *Aulacomnium. palustre* is widespread in the northern hemisphere, whereas *A. acuminatum* and *A. turgidum* are more closely associated with Arctic and alpine environments. It is most noticeable when forming large, brightly coloured colonies in peatlands and tundra, but it is present with localized moisture in many habitat types.

***Aulacomnium turgidum* (Wahlenb.) Schwägr.**
Mountain groove moss – aulacomnie gonflée
Figure 80

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GL-2, incidental taxon of *Bültmann & Raynolds s.n.* (CANM 10001063); site BI-1, *Hale 43* (NY 155049, det. WCS, US 04474052, det. WCS) • Kuugaaluk: site A22.3, *Gillespie et al. 12464* (CANM 10000435) • Tingijattut: site TG-2, incidental taxon of *Dare et al. 71* (CANM 10001073); site TG-1, *Doubt SOI2018-16* (CANM 10001096), *Doubt SOI2018-25* (CANM 10001103); site 15.7, *Gillespie et al. 12174* (CANM 10000424).

**Identification.** Plants are fairly large (to 10 cm tall and 5 mm wide), forming pure colonies, bright yellow or yellow-green when hydrated, drying to dark mustard or beige, acrocarpous. Stem rhizoids present but not matted, mostly not visible through the leaves. Leaves concave with apex suggesting a hood or prow of a boat, otherwise erect, straight, fairly tight to the stem (giving plants a smooth, wormline outline even when dry), unicostate, cucullate, margins entire. No specialized asexual reproduction recorded. Sexual condition dioicous.

**Substrate and habitat.** On damp peat, soil and rock in open areas such as meadows, shorelines and tundra.

**Bartramiaceae**

***Conostomum tetragonum* (Hedw.) Lindb.**
Helmet moss – quinte boréale

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Dansereau 500722-262* (NY 152884, det. WCS) • Barnes Plateau S: site BI-1, *Hale 46* (NY 152836, det. WCS, US 04440978); site GE-1, *Dansereau 500811-0573* (NY 152871, det. WCS), *Dansereau 500811-0574C* (NY 152872, det. WCS) • Tingijattut: site TG-1, *Doubt SOI2018-11* (CANM 10001093), *Doubt SOI2018-8* (CANM 10001092), *Doubt SOI2018-9* (CANM 10001089).

**Identification.** Plants light or glaucous green, forming compact tufts and turfs, to 0.5–3 cm tall, acrocarpous. Leaves appressed, 5-ranked, lanceolate, keeled, strongly unicostate. No specialized asexual reproduction recorded. Sexual condition dioicous. Capsules ovoid (in keeping with the apple moss family), exserted up to 2.5 cm.

Ranked forms of *Philonotis* can be initially confused with *C. tetragonum* but differ somewhat in leaf traits and markedly in capsule characters and axial slime papillae.

**Substrate and habitat.** On often damp soil, including thin soil over rock.

**Bryaceae**

***Ptychostomum arcticum* (R.Br.) J.R.Spence**
Syn.: *Bryum arcticum* (R.Br.) Bruch & Schimp.
Arctic bryum moss – bryum arctique

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 57* (NY 53147, det. HO as *Bryum arcticum*), *Hale 58* (NY 53149, det. HO).

**Identification.** Plants forming turfs, 0.5–3 cm tall; vegetative shoots evenly foliate, fertile shoots with leaves crowded near stem apices. Leaves ovate-lanceolate, flat, strongly limbate, bases concolourous with blade (red, pink, or green), not decurrent, apices acute to acuminate, costa strong, single, excurrent. Sexual condition polyoicous. Capsules brown, pendant, elongate-pyriform or clavate, symmetric or slightly curved; endostome with cilia absent or rudimentary; spores 24–30 um.

**Substrate and habitat.** On wet soil.

**Notes.** According to Spence (2014: 168), this is "one of the most variable and confusing species in the genus." *Ptychostomum* and several other genera segregated by Spence (2014) were formerly grouped together in the genus *Bryum*, and some recent resources (e.g., Faubert 2014, Faubert et al. 2014+) still use this more inclusive generic concept.

**Inuit Qaujimajatuqangit.** Norton (2018) reported finding references to the use of *Bryum* spp. (in the former, broad sense that once included the species that now make up *Ptychostomum*) for medicinal and other non-food purposes by Greenland Inuit.

***Ptychostomum calophyllum* (R.Br.) J.R.Spence**
Matted moss – bryum carpette

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Uqquqti: site 1.2, *Gillespie et al. 11783* (CANM 10000431).

**Identification.** Plants forming turfs, 1–3 cm tall; vegetative shoots evenly foliate, fertile shoots with leaves crowded near stem apices. Leaves broadly ovate, usually concave, limbate, bases concolourous with leaf blade (green), not decurrent, apices obtuse to broadly acute. Sexual condition autoicous. Capsules brown, pendant, short, ovate with thick hypophysis; endostome with cilia absent or rudimentary; spores 30–40 µm.

**Substrate and habitat.** On wet mineral soil.

**Notes.** This distinctive species is mainly arctic-alpine in distribution, but is disjunct to stations on Lake Athabasca, Lake Huron, and the Saint Lawrence Estuary.

**Inuit Qaujimajatuqangit.** See under *Ptychostomum arcticum*.

***Ptychostomum cyclophyllum* (Schwägr.) J.R.Spence**
Syn.: *Bryum cyclophyllum* (Schwägr.) Bruch & Schimp.; *Bryum tortifolium* Bridel.3565
Round-leaved bryum – bryum à feuilles rondes

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 44* (NY 92133 as *Bryum cyclophyllum*, US, det. WCS as *Bryum tortifolium*).

**Identification.** Plants forming turfs, 0.5–4 cm tall; vegetative shoots evenly foliate, fertile stems with leaves crowded near stem apices. Leaves broadly ovate, flat, strongly limbate, bases concolourous with blade (green), only weakly decurrent, apices obtuse to broadly acute, costa not exceeding apex. Sexual condition dioicous. Capsules brown, pendant, obovate, symmetric; endostome with long, appendiculate cilia; spores 14–16 µm.

**Substrate and habitat.** On wet soil.

**Notes.** Arctic-boreal species. Although we have not seen this specimen, this is a distinctive species and we trust the determination.

**Inuit Qaujimajatuqangit.** See under *Ptychostomum arcticum*.

***Ptychostomum intermedium* (Lindb.) J.R.Spence**
Syn.: *Bryum nitidulum* Lindb.

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 51* (NY 92533, det. HO as *Bryum nitidulum*).

**Identification.** Plants forming turfs, 0.5–2 cm tall. Leaves ovate, strongly concave, strongly limbate, bases red,

contrasting with green or brownish blade, not decurrent, apices acute to obtuse, costa at most weakly excurrent and usually not exceeding apex. Sexual condition synoicous or polyoicous. Capsules brown, short-pyriform, asymmetric, curved; endostome not adherent to exostome, cilia variably well developed or reduced.

**Substrate and habitat.** On wet soil.

**Notes.** Common names for this species are not available from the references selected as standards for this publication. Hallingbäck et al. (2008) used many-seasoned thread-moss.

**Inuit Qaujimajatuqangit.** See under *Ptychostomum arcticum*.

**Calliergonaceae**

***Loeskypnum wickesiae* (Grout) Tuom.**
Wickes' loeskypnum moss – guivre à feuilles droites

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-1, *Doubt SOI2018-18* (CANM 10001098).

**Identification.** Plants prostrate, sparsely branched, medium-sized, yellow-brown to copper-brown (never red), pleurocarpous. Stem hyalodermis absent, central strand present. Leaves straight, strongly concave and imbricate, apices acute or rounded, often apiculate and cucullate, costa ending well below leaf apex, usually ½–⅞ of leaf length. Stem leaf alar cells slightly enlarged, walls firm, incrassate; laminal cells thick-walled and porose. Sexual condition dioicous.

*Loeskypnum badium* (Hartm.) H.K.G.Paul, which is similar in colour and growth form, has falcate leaves with acuminate apices.

**Substrate and habitat.** Open, wet, intermediately minerotrophic habitats such as fens and seeps, in damp but not usually emergent or submerged situations.

***Sarmentypnum exannulatum* (Schimp.) Hedenäs**
Syn.: *Drepanocladus exannulatus* (Schimp.) Warnst.; *Warnstorfia exannulata* (Schimp.) Loeske
Ringless hook moss - lamie commune
Figure 81A

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Clark Fiord: site 20.2, *Gillespie et al. 12355* (CANM 10000432) • Kuugaaluk: site KM-1, *Miller B024* (COLO-B-0062164, det. JAJ as *Drepanocladus exannulatus*).

**Identification.** Plants branching, prostrate or ascending, red or red-tinged green, pleurocarpous. Stem hyalodermis partial; central strand present. Leaves concave and usually falcate, costa ending well below leaf apex, margins above alar cells sharply denticulate. Alar cells dramatically inflated and clear, extending from margins in triangular groups that narrow to (or almost to) costa. Sexual condition dioicous. Capsules curved, horizontal to substrate.

**Substrate and habitat.** Saturated or submerged soil or peat of pools, ponds, springs, seeps, and fens.

**Notes.** *Sarmentypnum exannulatum* is common in northern Canada. The collection, *Miller B024*, from cliffs near the mouth of Kuugaaluk is a subfossil collected for a radiocarbon study but apparently not dated.

***Sarmentypnum pseudosarmentosum* (Cardot & Thér.) Hedenäs**

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-1, *Doubt SOI2018-5* (CANM 10001086).

**Identification.** Plants branching, prostrate or ascending, red or red-tinged green, pleurocarpous. Stem hyalodermis absent; central strand present. Leaves strongly concave and straight, ovate-triangular, gradually narrowed to acute- or blunt-acuminate apex, costa ending below leaf apex, proximal leaf margins above alar cells usually entire. Alar cells inflated, hyaline, thin walled, extending from margin to costa. Sexual condition dioicous.

**Substrate and habitat.** Margins of flowing water such as springs, streams and seeps.

**Notes.** Hedenäs (2014: 402) raised uncertainty as to whether *S. pseudosarmentosum* is "an Arctic modification" of *S. exannulatum*.

***Sarmentypnum sarmentosum* (Wahlenb.) Tuom. & T.J.Kop.**
Twiggy spoon moss – lamie rouge

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-1, incidental taxon of *Doubt SOI2018-23* (CANM 10001104).

**Identification.** Plants branching, prostrate or ascending, red or red-tinged green, pleurocarpous. Stem hyalodermis absent; central strand present. Leaves concave, straight, ovate, abruptly narrowing to obtuse or apiculate apex, costa 4/5 or more of leaf length, proximal leaf margins above alar cells entire. Alar cells inflated, becoming thick-walled and incrassate toward the costa. Sexual condition dioicous.

Owing to the abruptly narrowed leaves and the erosion of the leaf apiculus on older leaves, this species may be initially confused with depauperate forms of *Calliergon* (Sull.) Kindb. species, which, however, do not exhibit red pigmentation.

**Substrate and habitat.** On soil that is wet, saturated or submerged by lakes, springs, or fens, and in late snow beds.

***Scorpidium cossonii* (Schimp.) Hedenäs**
Cosson's hook moss – scorpidie verdâtre

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-1, incidental taxon of *Doubt SOI2018-23* (CANM 10001104).

**Identification.** Plants sodden branched wefts, green to dark brown, red-brown, or blackish, pleurocarpous. Stem hyalodermis well-developed. Leaves falcate, unicostate, almost entire. Sexual condition dioicous.

This species is superficially very similar to *Scorpidium revolvens* but differs in having shorter cells with more square ends and being sexual condition dioicious.

**Substrate and habitat.** Emergent or submerged on soil or rock in saturated, usually calcium-rich habitats.

**Notes.** This taxon was considered, for a time, to be a variety of *Scorpidium revolvens*, and most recently was elevated to species status by Anderson et al. (1990). There may remain many specimens of *S. revolvens* identified before that time (sometimes as *Drepanocladus* (Müll. Hal.) G. Roth or *Limprichtia* Loeske) that are *S. cossonii*.

***Scorpidium revolvens* (Sw.) Rubers**
Rusty hook moss – scorpidie rouge violacé

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.4, *Gillespie et al. 11962* (CANM 10000426).

**Identification.** Plants sodden branched wefts, green to dark brown, red-brown, or blackish, pleurocarpous. Stem hyalodermis well-developed. Leaves falcate, unicostate, almost entire. Sexual condition autoicous.

Very similar to *Scorpidium revolvens* but differing in its autoicous sexual condition, longer laminal cells, and more gradual, fusiform cell terminations. In the field, colouration (dark red in *S. revolvens* vs. green or mottled red in *S. cossonii*) and branching habit (long irregular branches in *S. revolvens* vs. short abundant branches in *S. cossonii*) may provide useful clues (Atherton et al. 2010).

**Substrate and habitat.** Wet or periodically wet, mineral-rich habitats, in the open, often covering large areas.

**Campyliaceae**

***Hygrohypnum luridum* (Hedw.) Jenn.**
Drab brook moss – riverine terne

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Dansereau 500722-0152* (NY 1162663, det. WCS).

**Identification.** Plants variably vivid to dull green, yellow-green, or dark, pleurocarpous. Stems without a differentiated hyalodermis. Leaves straight to falcate, lanceolate or ovate, fairly flat or shallowly concave, costa variably single (weak or less frequently strong), branching, double, or absent, margins entire, plane or somewhat erect. Alar cells differentiated, quadrate or short-rectangular, markedly wider than laminal and basal cells. Sexual condition autoicous.

**Substrate and habitat.** On rock (often calcareous) or other solid substrates in flowing fresh water.

**Notes.** As evident in the description, this species is very variable, even within a single collection.

***Hygrohypnum polare* (Lindb.) Loeske**
Syn.: *Hygrohypnella polaris* (Lindb.) Ignatov & Ignatova
Northern hygrohypnum moss

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Dansereau 500722-0151* (NY 1163258, det. WCS), *Dansereau 500722-0153* (NY 1163257, det. WCS).

**Identification.** Plants long (to 13 cm long), green to yellow, sparsely branching, pleurocarpous. Stem hyalodermis present. Leaves elliptic, usually concave, apex blunt or acute. Sexual condition dioicous.

As compared with *Hygrohypnum* ochraceum (Turner ex Wilson) Loeske (a similar species not recorded in the park), leaves of *H. polare* are strongly unicostate, the midrib reaching almost to the leaf apex, and its alar cells are firm-walled and quadrate.

**Substrate and habitat.** On acid rock submerged in or emergent from flowing fresh water.

### Dicranaceae

#### *Dicranella subulata* (Hedw.) Schimp.

Awl-leaf forklet moss – dicranelle aiguille

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-1, *Doubt SOI2018-7* (CANM 10001088).

**Identification.** Plants small (to 1 cm tall), yellow-green, acrocarpous. Leaves sheathing stem in the proximal ⅓ or more, abruptly narrowing to long, slender, erect-falcate, subulate limbs, costa far exceeding lamina. Laminal cells long-rectangular. Sexual condition dioicous. Capsules inclined or horizontal, asymmetric, striate; seta red when newly mature.

**Substrate and habitat.** On damp, exposed soil.

**Notes.** Hallingbäck et al. (2006) emphasized that *D. subulata* depends on natural or human disturbance for bare soil substrate; it is a poor competitor.

#### *Dicranum groenlandicum* Brid.

Greenland broom moss – dicrane arctique

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-2, incidental taxon of *Dare et al. 69* (CANM 10001069).

**Identification.** Plants forming dense tufts, medium to large (to 10 cm tall), light yellow-green to brownish green, acrocarpous. Stems felted throughout with brownish rhizoids. Leaves long-lanceolate, erect, costa not exceeding the narrowly obtuse apex, forming only a low ridge on dorsal side of the leaf (producing a tubulose leaf with rounded cross section), margins entire. Laminal cells elongate, pitted above base to well beyond halfway to apex, sometimes becoming shorter and smooth-walled in distal extremity. Sexual condition dioicous. Capsules curved to almost straight.

This arctic-alpine species can intergrade with *Dicranum elongatum* Schleich. ex Schwägr., another tundra species that has acute leaf tips and elongate leaf cells only below the halfway point. Leaves of *D. groenlandicum* are more broadly subulate and generally smaller than those of *D. spadiceum* (usually 3–4× 0.3–0.5 mm in the former, and 5.5–8× 0.5–1 mm in the latter, although their ranges of variation overlap).

**Substrate and habitat.** In moist tundra soil or soil over rock.

**Inuit Qaujimajatuqangit.** Norton (2018) found references suggesting that *D. groenlandicum* is used for medicine, fire, and as a material useful for carrying out other daily tasks. Black et al. (2008) reported that Inuit informants described medicinal use of a similar and closely related species, *D. elongatum*—both as dry whole plants and prepared as a broth—for indigestion (no other bryophytes were included in the study). *Dicranum elongatum* is also one of several mosses that references in Glime (2017) reported being used for Qulliq wicks.

#### *Dicranum spadiceum* J.E.Zetterst.

Confusing broom moss – dicrane boréal

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-1, *Doubt SOI2018-15* (CANM 10001095).

**Identification.** Plants densely tufted, medium to large (to 10 cm tall), light green, glossy, acrocarpous. Stems thickly felted with brownish rhizoids. Leaves long-lanceolate, subulate in distal half or more, erect, costa percurrent to excurrent costa forming only low ridge on dorsal side of the leaf (producing a tubulose leaf with rounded cross section), margins entire. Laminal cells elongate, pitted throughout. Sexual condition pseudomonoicous, with dwarf male plants on the stem rhizoids of female plants. Capsules brown, curved, and inclined.

**Substrate and habitat.** On moist peat or soil, or soil over rock.

***Kiaeria starkei* (F.Weber & D.Mohr) I.Hagen**
Starke's Fork Moss – faux-dicrane alpin

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 42* (NY 124043, det. WCS).

**Identification.** Plants forming wispy yellow-green or brownish tufts, usually 1–2 cm tall, acrocarpous. Leaves narrowly and gradually long-lanceolate, to 4 mm long. Alar cells differentiated, brown. Sexual condition autoicous, perigonia below perichatia on fertile stems. Capsules inclined, asymmetric.

*Kiaeria* is distinguished from other members of the Dicranaceae by its narrow costa, flexuose or falcate leaves, unistratose alar cells, and the absence of stereid bands (as evident in the leaf cross-section). From *Arctoa*, the genus it resembles most closely, it is distinguished by capsule shape (asymmetric in *Kiaeria* vs. symmetric in *Arctoa*) and stance (inclined vs. erect). Within *Kiaeria, K. starkei* is recognized by its elongate, smooth-walled distal laminal cells, ribbed capsule, and sessile perigonia.

**Substrate and habitat.** On rock outcrops or mineral soil of cliff ledges and cracks; sometimes associated with late snow beds.

**Inuit Qaujimajatuqangit.** Inuvialuit Elders, with Bandringa (2010), recorded the medicinal use by Inuvialuit of the related arctic-alpine *Kiaeria blyttii,* in sled dog food (to help eliminate intestinal worms).

***Oncophorus wahlenbergii* Brid.**
Wahlenberg's spur moss – oncophore pomme-d'Adam

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-1, *Doubt SOI2018-12* (CANM 10001094), *Doubt SOI2018-24* (CANM 10001102).

**Identification.** Plants light to vivid to dark green, forming variously soft or compact cushions or turfs, to 2.5 cm tall. Leaves very curled when dry, wide spreading when moist, abruptly subulate from clasping, winged base, margins plane. Leaf cells above the "shoulders" green, quadrate; cells of leaf sheath wider, long-rectangular and hyaline. Sexual condition autoicous. Capsules curved, furrowed, horizontal and strumose (with a goiter-like swelling at the base).

**Substrate and habitat.** On moist tundra soil.

**Notes.** In temperate North America, especially, *O. wahlenbergii* is a common epixylic forest species. Newmaster (2007) referenced, but did not formally recognize, a dense, arctic-alpine form that has been treated by some other authors as var. *compactus* (Bruch & Schimp.) Braithw.

**Ditrichaceae**

***Ceratodon purpureus* (Hedw.) Brid.**
Red roof moss – cératodon pourpre

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 53* (NY 115904 det. WCS).

**Identification.** Plants green to reddish, forming cushions or dense turfs, 0.3–1.5 cm tall or more, acrocarpous. Leaves contorted when dry, lanceolate, costa single and strong (subpercurrent or excurrent), margins recurved and often few-toothed near apex, apex acute. Laminal cells squareish. Sexual condition dioicous. Capsules often abundant, bright to dark wine-red, horizontal, curved, strumose; seta reddish.

**Substrate and habitat.** Highly flexible and tolerant of a wide array of substrates and habitats. Particularly abundant and "weedy" in some post-disturbance situations such as clearings, roadsides, graveled surfaces and burned ground.

**Notes.** This species is extremely widespread, occurring on all continents and common in many regions.

***Flexitrichum flexicaule* (Schwägr.) Ignatov & Fedosov**
Flexible cow-hair moss – ditric flexueux

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GL-2, incidental taxon of *Bültmann & Raynolds s.n.* (CANM 10001063) • Tingijattut: site TG-2, incidental taxon of *Dare et al. 67* (CANM 10001072).

**Identification.** Plants rich to dark green, soft, forming dense tufts and turfs, to 5 cm tall, acrocarpous. Leaves narrow, erect. Leaf cells short, thick-walled, becoming elongate and bleeding up the margins in proximal part of leaf. Sexual condition dioicous. Capules erect; seta to 2 cm long.

**Substrate and habitat.** Open rock or soil over rock, generally with calcareous influence.

**Figure 81. A.** *Sarmentypnum exannulatum*, habit. *Gillespie et al. 12355*. **B–C.** *Racomitrium lanuginosum*. **B.** Habitat, Baffin Island, Nunavut. **C.** Habit, Salluit, Quebec. Photos by P.C. Sokoloff (A), J. Doubt (B) and G. Rand (C).

**Notes.** This species is highly variable in colour, plant size and leaf size and form. Most resources do not mention specialized asexual reproduction, but in most colonies some branches grow taller above the general canopy (e.g., illustration in Atherton et al. 2010: 348). With reduced, appressed leaves and fairly brittle stems, these shoots break off easily and are exposed to wind or other passing vectors, probably serving as excellent vegetative propagules.

**Inuit Qaujimajatuqangit.** Norton (2018) found references suggesting that *F. flexicaule* was used for fire by eastern Canadian Inuit.

**Grimmiaceae**

***Racomitrium lanuginosum* (Hedw.) Brid.**
Hoary rock moss – frangine laineuse – uqjuk (Burt et al. 2010), maniq, nunajaq, nunajatuinnaq, nunariak, nunakallak, urjuq, urquq (Blondeau et al. 2011)
Figure 81B, C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 25.1, *Gillespie et al. 11574* (CANM 10000433)• Barnes Plateau S: site GL-2, incidental taxon of *Bültmann & Raynolds s.n.* (CANM 10001063); site BI-1, *Hale 40* (US 04510476, det. WCS) • Kuugaaluk: site A22.2, *Gillespie et al. 12455* (CANM 10000438) • Tingijattut: site TG-2, *Dare et al. 68* (CANM 10001076, QFA 0348929), *Dare et al. 67* (CANM 10001072); site TG-1, *Doubt SOI2018-10* (CANM 10001090).

**Identification.** Plants olive-green with white-tipped leaves, forming deep, dense tufts, sometimes exceeding 15 cm tall, cladocarpous. Leaves with marginal teeth at the leaf tip often so large, divergent, and distantly spaced that they can be seen easily with a hand lens (10–20×), white colour of leaf apex extending lower on the margins than in middle. Leaf surface (seen under microscope) with conspicuous laminal papillae that overlie walls between adjacent cells. Sexual condition dioicous. Capsules erect, ovoid to cylindric; seta papillose, to 1 cm long; plants sometimes polysetose.

**Substrate and habitat.** On soil and rock in dry, exposed areas (e.g., tundra, peatland, stable pockets between talus boulders) with lots of sun.

**Notes.** This species can be quite dominant, covering large areas.

**Inuit Qaujimajatuqangit.** Useful as a mattress for sleeping (Burt et al. 2010; Blondeau et al. 2011). In Nunavik, it also is reported to be used as a wick for the qulliq and as combustible fuel for other applications such as smoking hides; to hide fox traps; to insulate or seal dwellings or food; to prepare Qamutiik (sled) runners; to diaper infants; and to clean or scour (Blondeau et al. 2011; Clark 2012). Hantzsch (1931) and Harris (2008) also reported its use as a lamp wick.

***Niphotrichum panschii* (Müll.Hal.) Bedn.-Ochyra & Ochyra**
Arctic rock moss – frangine arctique

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-1, *Doubt SOI2018-3* (CANM 10001091).

**Identification.** Plants forming thick tufts and turfs of green shoots, appearing "frosted" due to white awns at the leaf tips. Laminal papillae overlie the cell lumens; papillae are absent at the extremities of the leaves (both in the proximal 2–4 rows of cells and in the distal part of the hyaline awn). Fertile plants have not been reported.

In contrast with *Racomitrium lanuginosum*, marginal teeth of *N. panschii* are smaller and are most readily seen with a microscope.

**Substrate and habitat.** On soil and rocks, in a range of moisture conditions and degrees of exposure (e.g., seepages, depressions, late snow beds, talus slopes, cliffs, tundra)

**Notes.** This species is very similar to *Niphotrichum canescens*; herbarium specimens from Arctic regions that are identified as such bear confirmation. *Niphotrichum* is one of several segregates of *Racomitrium* s.l.

**Inuit Qaujimajatuqangit.** Norton (2018) found information suggesting that *Racomitrium*, in the broad sense, was important in the eastern Arctic for building fires.

**Hylocomiaceae**

***Hylocomium splendens* (Hedw.) Schimp.**
Stairstep moss – hylocomie brillante

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GL-2, *Bültmann & Raynolds s.n.* (CANM 10001063, det. HB & MR, stet JD).

**Identification.** Plants, when well developed, with 2–3 pinnate branching, forming arched, 20 cm long frondose shoots alternating with segments of ascending, unbranched stem; reduced forms, more frequent in the Arctic, with fewer iterations of branching and shorter inter-frond stems; pleurocarpous. Stems, which are especially visible when the moss is wet, are red and covered in abundant pale green paraphyllia. Leaves pale green, appressed when dry but somewhat spreading when moist, those of increasing branch iterations more ovate-concave in shape and smaller in size. Sexual condition dioicous.

**Substrate and habitat.** On soil, rock and woody debris, especially in mesic peatland and tundra.

**Notes.** This moss produces a new frond each growing season, resulting in the "stairstep" pattern that inspires its English name. However, in Arctic environments, the annual fronds can be difficult to discern, and colonies can display such a dense growth form that their general appearance is difficult to reconcile with the large, puffy wefts that are more typical in boreal and temperate regions.

**Hypnaceae**

***Campylium bambergeri* (Schimp.) Hedenäs, Schlesak & D.Quandt**
Bamberger's golden plait moss – hypne brune

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-1, *Doubt SOI2018-17* (CANM 10001097).

**Identification.** Plants shiny (even when dry), reddish or yellowish brown or golden, often robust and forming large, pure colonies, pleurocarpous. Stems lack differentiated hyalodermis. Leaves falcate, costa not consistently strong. Leaf cells thick-walled, pitted cells throughout the leaf. Sexual condition dioicous. Capsules curved, horizontal or somewhat inclined; seta reddish, to 2 cm long.

**Substrate and habitat.** Over soil/peat or (generally calcareous) rock, mainly in exposed seepage sites, depressions, or other areas with periodic moisture.

**Notes.** Until relatively recently, this species was included in the genus *Hypnum*, with which it shares characteristics such as falcate leaves.

**Meesiaceae**

***Meesia uliginosa* Hedw.**
Broad-nerved hump-moss – meesie des marais

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 24.4, *Gillespie et al. 11553* (CANM 10000421).

**Identification.** Plants small (to 3 mm tall) but often with disproportionately conspicuous sporophytes to 5 cm tall, acrocarpous. Leaves unranked, narrow, more or less parallel-sided, margins revolute, costa strong, occupying significant proportion of leaf area, apex bluntish, tapering only slightly. Sexual condition usually dioicous, sometimes polyoicous. Capsules with strong hypophysis, giving them a characteristic bent, almost creased shape when mature.

**Substrate and habitat.** On soil and peat, often associated with rich fen habitats.

**Notes.** *Meesia hexasticha* is often excluded from the North American flora, despite the existence of specimens consistent with material from Europe (Favreau & Brassard 2011). It is more similar to *M. uliginosa* in its narrow, erect leaves and revolute leaf margins than the other *Meesia* species in Arctic North America and is best distinguished based on characters of the leaf cross-section. *Meesia uliginosa* is also part of the Antarctic bryophyte flora (Ochyra and Lewis-Smith 1999).

**Mniaceae**

***Pohlia crudoides* (Sull. & Lesq.) Broth.**
Pipe nodding moss – pohlie boréale

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GE-1, *Dansereau 500811-0474* (NY 118067, det. WCS).

**Identification.** Plants acrocarpous. Stems red. Leaves green, unbordered, erect, lanceolate, margins recurved, distally serrulate. Sexual condition dioicous. Capsules inclined, neck occupying about ⅓ length.

*Pohlia crudioides* is one of two North American species with recurved leaf margins, the other of which (*P. cardotii* (Renauld) Broth.) can be readily distinguished based on cell and sporophyte characters and is confined (in North America) to the Pacific Northwest.

**Substrate and habitat.** on open soil.,

**Notes.** This circumpolar, largely Arctic and alpine species is found in Greenland and across Eurasia. It may be more common than the collection record suggests.

***Pohlia nutans* (Hedw.) Lindb.**
Common nodding moss – pohlie penchée

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 50* (NY 118391, det. WCS, US 04438634), *Hale 56* (NY 118392, det. WCS, US 04438635) • Clark Fiord: site 20.1, *Gillespie et al. 12334* (CANM 10000427).

**Identification.** Plants green, size variable (0.5–5 cm tall or more), acrocarpous. Leaves unbordered, erect, lanceolate, plane, margins usually distally serrulate. Sexual condition paroicous. Capsules usually nodding, sometimes horizontal; seta orangey brown, 2–4 cm long.

Like many other *Pohlia* species that have unremarkable erect, unbordered, distally serrulate, lanceolate leaves, *P. nutans* is best distinguished with microscopic characters. Thick-walled laminal cells quickly narrow the range of possibilities, and cell length is a helpful subsequent character in the absence of sporophytes. When capsules are available, the presence of cilia in the endostome confirm *P. nutans* as opposed to the very similar *P. elongatum*.

**Substrate and habitat.** on soil, peat, and woody debris (including small pockets or shallow layers of soil associated with rocky habitats) in shaded to exposed situations and a wide spectrum of moisture conditions.

**Notes.** This cosmopolitan, often disturbance-associated moss with a broad range of substrate and habitat tolerances, is the most common representative of its genus in North America. It is sometimes referred to as the copper wire moss, owing to the shiny copper colour of its mature setae.

**Inuit Qaujimajatuqangit.** Griffin (2001) cites references reporting the use of *P. nutans* by the Nunivarmiut people (Alaska) as a food ingredient, tea, diapers, wound dressing, starting fires (when mixed with seal oil), and protecting clay pottery before firing. The study noted that all moss species were known by a single name; the uses cited may similarly encompass a variety of different species.

***Pohlia obtusifolia* (Vill. ex Brid.) L.F. Koch**
Bluntleaf thread moss – pohlie à feuilles obtuses

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Arviqtujuq Kangiqtua NW: site 18.3, *Gillespie et al. 12260* (CANM 10000423).

**Identification.** Plants pale green, forming turfs or tufts less than 1 cm tall, acrocarpous. Leaves broadly lanceolate, erect, margins distally serrulate, apex broadly acute; median cells distinctively lax, hexagonal, thin-walled. Specialized asexual reproduction absent. Sexual condition paroicous. Capsules ovoid-pyriform, neck occupying about ⅓ of length; seta orange-brown, 1–3 cm long.

Sterile specimens of *Pohlia obtusifolia* can be confused with *P. drummondii* (which has similarly distinctive leaf cells but is dioicous and often produces axillary gemmae). According to Shaw (2014) cucullate

leaves distinguish vegetative *P. obtusifolia* from those *P. drummondii* in unusual cases where both axillary gemmae and fertile shoots are absent from specimens of the latter species.

**Substrate and habitat.** On soil, often in late snowmelt areas.

**Notes.** This is an arctic-alpine species.

***Pohlia proligera* (Kindb. ex Breidl.) Lindb. ex Arnell**
Cottony nodding moss – pohlie à bulbilles minces

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 47* (NY 118160, det. WCS, US 04439233).

**Identification.** Plants green, very shiny (aptly described by Hallingbäck et al. 2010 as "opalescent"), 0.5–3.5 cm tall, acrocarpous. Leaves lanceolate erect, plane, margins distally serrulate. Specialized asexual reproduction by generally abundant slender axillary gemmae that can resemble, in the field, a fuzzy coating of paraphyllia. Sexual condition dioicous. Capsules inclined to erect.

The distinctive combination of the erect, peg-like leaf primordia of the gemmae and glossy leaves make this *Pohlia* easier to recognize than many others.

**Substrate and habitat.** On bare sandy soil, often associated with disturbance.

**Notes.** Fruiting plants are less common than gemmiferous ones. Farther south, this species can be found at the margins of gravel roads and parking lots, and on early-successional abandoned clearings.

**Polytrichaceae**

***Oligotrichum falcatum* Steere**
Sickle-leaved hair moss – polytric à feuilles falciformes

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GL-4, *Bültmann & Raynolds s.n.* (CANM 10001065).

**Identification.** Plants coarse, 1.5–2 cm tall (sometimes larger), acrocarpous. Leaves green (red-brown with age), sweeping to one side of stem, margins curve inward, lacking thin-walled hyaline border cells (as compared with superficially similar *Psilopilum*), apex cucullate; adaxial lamellae, undulate, irregularly toothed, covering costa and central part of the leaf in about distal ⅔. Sexual condition dioicous. Capsules cylindric; seta to 1.5 cm long.

**Substrate and habitat.** On soil or soil over rock that is generally saturated by nearby waterbodies or seeps.

**Notes.** Some keys point to the absence of abaxial lamellae in distinguishing *Psilopilum* from *Oligotrichum*. However, *Oligotrichum* is variable in this regard and *O. falcatum* tends to be abaxially smooth.

***Pogonatum dentatum* (Menzies ex Brid.) Brid.**
Mountain hair moss – polytric denté

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Arviqtujuq Kangiqtua NW: *Gillespie et al. 12259* (CANM 10000429) • Barnes Plateau S: site GE-1, *Dansereau 500811-0574A* (NY 176413, det. DGL) • Tingijattut: site TG-1, *Doubt SOI2018-4* (CANM 10001085).

**Identification.** Plants green or blue-green, unbranched, 1–3 cm tall, acrocarpous, reminiscent of tiny conifer shoots. Leaves fleshy, wide-spreading when hydrated, marginal teeth multi-cellular, apex sharp; lamellae 20–30 per leaf, covering most of leaf area distal to sheath, marginal cells lamellae flat-topped in cross section, as wide as or wider than tall, papillose on distal cell walls. Sexual condition dioicous. Capules cylindric, 2–3 mm long; seta usually less than 4 cm long.

**Substrate and habitat.** Open, dry mineral soil or soil over rock, often associated with past disturbance.

**Notes.** All *Pogonatum* species are dioicous, with male and female reproductive structures occurring on separate plants *Pogonatum dentatum* can have caducous (easily detaching) leaves, particularly in the Arctic (Smith Merrill 2007), promoting vegetative reproduction and dispersal.

***Polytrichastrum alpinum* (Hedw.) G.L.Sm.**
Alpine haircap moss – polytric alpin

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Dansereau 50722-261* (NY 183958, det. WCS) • Barnes Plateau S: site GE-1, *Dansereau 500811-0566a* (NY 183298, det. WCS); site BI-1, *Hale 49* (NY 184039, US 04478041, det. WCS), *Hale 55* (NY 184034, not seen) • Ravenscraig Harbour:

site RH-1, *Dare 29* (CANM 10001070); site 18.6, *Gillespie et al. 12281* (CANM 10000439) • Tingijattut: site TG-1, incidental taxon of *Doubt SOI2018-11* (CANM 10001093).

**Identification.** Plants dull green, unbranched, 1–10 cm tall, acrocarpous, reminiscent of tiny conifer shoots. Leaves wide-spreading leaves; adaxial lamellae covering almost entire surface, entire in profile, marginal cells papillose, taller than wide in cross section, often slightly narrowed at distal end, distal walls thick-looking, lumen peaked. Sexual condition dioicous. Capsules horizontal to erect, cylindric 1.5–8 mm (Smith Merrill 2007); seta 3–5 cm long.

**Substrate and habitat.** On soil, including thin soil over rock substrates with variable exposure and moisture; not associated with wet habitats.

**Notes.** Smith Merrill (2007) provides a key to 4 varieties of *P. alpinum*, of which 3 occur in Nunavut, differing in size, leaf serration and leaf persistence. Leaf cross-sections that permit visualization of the shape of the terminal cells of leaf lamellae are key to differentiating many taxa in the Polytrichaceae. Faubert (2013: 82) includes an excellent cartoon illustrating this point.

***Polytrichum hyperboreum* R.Br.**
Hyperboreal haircap moss – polytric hyperboréen

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site 31.4, *Gillespie et al. 11750* (CANM 10000430).

**Identification.** Plants green, branched (the branches ascending in parallel), to 10 cm tall, acrocarpous, reminiscent of small conifer shoots. Leaves: costa excurrent as rigid, rough awn that is brown proximally and white distally, margins entire, membranous, transluscent, infolded and meeting across adaxial surface; lamellae 20+, straight, marginal cells in cross section taller than wide, narrowed at apex, thin walled. Sexual condition dioicous. Capsules erect to horizontal, angled (squareish in cross section), to 3 mm long, longer than wide; seta to 3 cm long.

*Polytrichum juniperinum, P. piliferum*, and *P. strictum* also have membranous, entire leaf margins. In the field, the lack of a gap between the infolded leaf margins (adaxial lamellae completely encosed) and the two-tone awns of *Polytrichum hyperboreum* are helpful for identification.

**Substrate and habitat.** Open mineral soil and compact tundra.

***Polytrichum juniperinum* Hedw.**
Juniper haircap moss – polytric genévrier

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Dansereau 500723-866* (NY 220044, det. WCS) • Barnes Plateau S: site BI-1, *Hale 41* (NY 220138, US 04454024, det. WCS).

**Identification.** Plants green to blue-green, to 10 cm tall but usually much shorter in northern regions, acrocarpous, reminiscent of small conifer shoots. Leaves erect, fleshy, usually to 6 mm long, costa excurrent as short, brown awn, margins entire, membranous, transluscent, infolded but generally not meeting for some of length; adaxial lamellae partially visible., marginal cells pyriform in cross section, thick-walled. Sexual condition dioicous. Capsules angled, squareish in cross-section, 2.5–5 mm long, longer than wide.

**Substrate and habitat.** Exposed, well-drained soil and soil over rock.

***Polytrichum piliferum* Hedw.**
Bristly haircap moss – polytric porte-poil

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Dansereau 500722-261* (NY 220385, not seen) • Barnes Plateau S: site GL-8, *Bültmann & Raynolds s.n.* (CANM 10001064, det. HB & MR, stet JD) • Tingijattut: site TG-1, *Doubt SOI2018-2* (CANM 10001082).

**Identification.** Plants green to blue-green, unbranched, to 2(–4) cm tall, acrocarpous, reminiscent of tiny conifer shoots. Leaves wide spreading when hydrated, costa excurrent as long, white awn; margins entire, membranous, transluscent, infolded but generally not meeting for some of length; adaxial lamellae partially visible. Sexual condition dioicous. Capsules short, squarish in cross section (almost cubic); seta 1–4.3 cm long.

**Substrate and habitat.** Dry, exposed mineral soil and soil over rock.

**Inuit Qaujimajatuqangit.** Norton (2018) reported finding references to the use of *Polytrichum piliferum* for fire by Greenland Inuit.

***Polytrichum strictum* Menzies ex Brid.**
Bog haircap moss - polytric dressé

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 24.1, *Gillespie et al. 11544* (CANM 10000428).

**Identification.** Plants green, unbranched, to 12 cm or more, narrow, acrocarpous, reminiscent of tiny conifer shoots. Stems densely felted with white rhizoids below surface of turf (especially visible when water squeezed from this spongey coating). Leaves usually erect-spreading when hydrated, costa excurrent as short, brown awn, margins entire, membranous, transluscent, and infolded but usually not meeting for some of length. Sexual condition dioicous. Capsules short, squareish in cross section (almost cubic), 2–3 mm long; seta 2 – 4 cm long.

Short, under-developed plants of *Polytrichum strictum* can be confused with tall, slender *P. juniperinum* shoots, in which cases sporophyte characters and stem tomentum are useful distinguishing characters.

**Substrate and habitat.** On hummocks in peatlands and on soil of tundra heaths.

**Notes.** As *P. strictum* is characteristic of moist habitats, it tends to be green most of the time when it is encountered in the field.

***Psilopilum cavifolium* (Wilson) I.Hagen**
Little wolverine moss – polytric à feuilles concaves
Figure 82A–C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site 31.4, *Gillespie et al. 11761* (CANM 10000436), *Gillespie et al. 11762* (CANM 10000425); site 31.8, *Gillespie et al. 11773* (CANM 10000440); site BI-1, *Hale 45* (NY 183565, det. DGL).

**Identification.** Plants forming diffuse colonies, 0.5–1 cm tall, acrocarpous. Leaves 2–3 mm long, in-rolled when dry, and spreading but still concave-cucullate when hydrated, margins entire or sub-entire; ventral lamellae attached along costa, 7–10, longitudinally-aligned, margins entire. Sexual condition dioicous. Capsules inclined, cylindrical, asymmetrically curved; seta 1 – 2 cm long.

*Psilopilum cavifolium* differs from *P. laevigatum* in the entire, free margins of the lamellae and the entire or sub-entire leaf margins. Its capsules are less curved and its leaves change more markedly on hydration.

**Substrate and habitat.** Open, unstable mineral substrates of disturbed habitats, such as those subject to flooding or erosion. According to Smith Merrill (2007), it prefers non-calcareous sites.

**Notes.** Some plants of *P. cavifolium* near the Barnes Ice Cap appear to have been exposed as the ice cap receded and may have survived burial since the beginning of the Little Ice Age more than 400 years ago.

***Psilopilum laevigatum* (Wahlenb.) Lindb.**
Large wolverine moss – polytric lisse
Figure 82D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, Hale 48 (NY 183635, det. GRB); site 31.9, *Gillespie et al. 11775* (CANM 10000437).

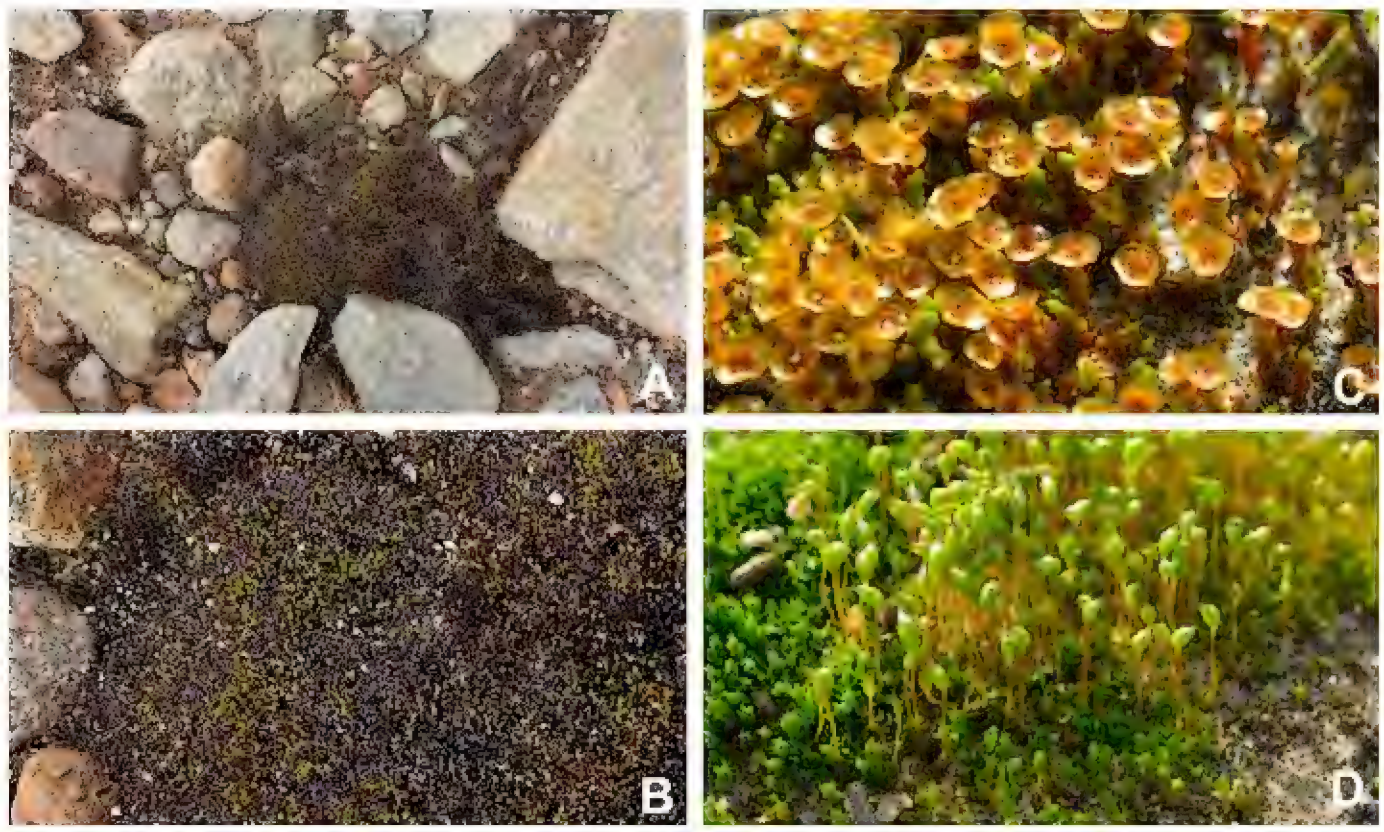


**Figure 82. A–C.** *Psilopilum cavifolium.* **A.** Habitat. **B.** Habit. *Gillespie et al. 11761.* **C.** Male plants. *Gillespie et al. 11773.* **D.** *Psilopilum laevigatum*, habit, showing young sporophytes. *Gillespie et al. 11775.* Photos by L.J. Gillespie (A–B) and P.C. Sokoloff (C–D).

**Identification.** Plants forming diffuse colonies, 0.5–1 cm tall, acrocarpous. Leaves 2–3 mm long, in-rolled when dry and spreading but still concave-cucullate when hydrated, margins dentate; ventral lamellae attached along costa, 7–10, longitudinally-aligned, margins dentate. Sexual condition dioicous. Capsules horizontal, cylindrical, asymmetrically curved.

*Psilopilum* laevigatum differs from *P. cavifolium* in the dentate free margins of the lamellae and the more markedly dentate leaf margins. Its capsules are more strongly curved and its leaves change less on hydration.

**Substrate and habitat.** Open mineral substrates of unstable, disturbed habitats, such as those subject to flooding or erosion. According to Smith Merrill (2007), it prefers non-calcareous sites.

### Rhytidiaceae

#### *Rhytidium rugosum* (Hedw.) Kindb.

Wrinkle-leaved moss – rhytidie rugueuse

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Dansereau 500723-865* (NY 164511, det. WCS).

**Identification.** Plants robust, branching, loosely prostrate, to 10 cm long, pleurocarpous. Stems reddish. Leaves golden yellow, rugose (often appearing crumpled), usually falcate, crowded and obscuring stems; median laminal cells prorate (leaves papillose by projecting distal ends of laminal cells); alar cells conspicuously differentiated, forming large groups of quadrate cells. Sexual condition dioicous. Capsules inclined to horizontal, arcuate, 2.5 mm long; seta to 2.5 cm long.

**Substrate and habitat.** Over rock or soil in unshaded or partly shaded, open habitats such as tundra and vegetation margins.

**Notes.** In the past, *Rhytidium* has sometimes been included in the Hylocomiaceae.

### Sphagnaceae

#### *Sphagnum fuscum* (Schimp.) H.Klinggr.

Brown peat moss – sphaigne brune

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Ravenscraig Harbour: site RH-1, *Dare 14* (CANM 10001071) • Tingijattut: site TG-2, *Dare et al. 69* (CANM 10001069), *Dare et al. 70b* (CANM 10001068).

**Identification.** Plants growing indeterminately, forming often compact, brown or green-brown carpets or hummocks, growth form (typical of genus) with differentiated spreading and hanging branches that are crowded together at growing tip, forming a 'pom-pom' style capitula, becoming more distant with age. Dark-coloured stems visible through stem leaves when wet. Lingulate stem leaves differentiated from lancolate branch leaves, both characterized by network of living green cells and empty hyaline cells (also characteristic of *Sphagnum*). Sexual condition dioicous. Capsules (typical for genus) dark, spherical, operculum round-convex, peristome absent.

Throughout most of its range, *Sphagnum fuscum* is the only small, brown, compact representative of section *Acutifolia*, but the more robust *S. arcticum* also occurs in northern Canada and might be confused in the field. It can be readily differentiated by narrow- to broad-lacerate stem leaves and light-coloured stems.

**Substrate and habitat.** In ombrotrophic situations in peatlands; most common and abundant in bogs but also forming hummocks in more generally minerotrophic habitats.

**Notes.** This species is common both in the Arctic and in ombrotrophic peatlands further to the south.

**Inuit Qaujimajatuqangit.** Clark (2012) recorded the use of *Sphagnum* species in northern Quebec (Kangiqsualujjaq) and Labrador (Nain) for diapers and sanitary napkins, cleaning (e.g., removing hair from seal hide), kindling fires, and concealing animal traps. Davis and Bannack (2012) recorded its use as absorbant bandages, diapers, insulation, and sled-runners among Inuinnait of western Nunavut. In a review of traditional uses of bryophytes, Harris (2008) additionally reported the application of *Sphagnum* species by Canadian Inuit as a salve and as chinking material for dwellings.

### Splachnaceae

#### *Splachnum vasculosum* Hedw.

Rugged dung moss – splanc pichet
Figure 83

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11810* (CANM 10000434).

**Figure 83.** *Splachnum vasculosum*. **A.** Habit (bright yellow tufts are *Aulacomnium* sp.). **B.** Sporophytes. *Gillespie et al. 11810*. Photos by P.C. Sokoloff.

**Identification.** Plants light to dark green, forming discrete turfs closely associated with dung or other nutrient sources of animal origin, 1–3 cm tall, acrocarpous plants. Leaves ovate to obovate, entire, unbordered, apex blunt. Sexual condition dioicous. Capsules with wide, inflated, purplish hypophyses and narrow, peg-like urns; spores sticky, clustered at caspule opening.

**Substrate and habitat.** Damp or wet habitats such as peatlands and soft tundra meadows, particularly on and near game trails, growing on excrement or decomposed animal remains.

**Notes.** Due to the ephemeral nature of its substrates, *Splachnum* grows, disperses, senesces, and re-establishes often within a given area. Most noticeable when in fruit due to its prominent, distinctive capsules. The spores are dispersed by flies.

***Tetraplodon mnioides* (Hedw.) Bruch & Schimp.**
Entire-leaved nitrogen moss – tétraplodon fauss

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GE-1, *Dansereau 500811-0573C* (NY 140257, det. WCS).

**Identification.** Plants green, forming dicrete tufts closely associated with dung or other nutrient sources of animal origin, 1–4 cm tall (or sometimes taller), acrocarpous. Leaves obovate, margins entire, abruptly subulate to narrow apex. Sexual condition autoicous. Capsules red, blackening with age, hypophyses long-ovate, exceeding urn in diameter; seta 1–5 cm long.

**Substrate and habitat.** Upland habitats on excrement of carnivorous animals and on animal remains, including antlers.

**Notes.** This species (like *Splachnum vasculosum*) is dispersed by insect vectors. It is one of the more common representatives of its genus in Arctic and boreal Canada. It can be quite conspicuous in the field, particularly when hydrated, as its vegetative growth often contrasts markedly with other nearby bryophytes; it can also fruit densely and abundantly, the sturdy red-black sporophytes standing out at a distance. Nonetheless, it is limited by its restriction to substrates that are temporary and discrete, and association with wildlife habitat.

**Liverworts**
**Anastrophyllaceae**

***Neoorthocaulis binsteadii* (Kaal.) L.Söderstr., De Roo & Hedd.**
Binstead's pawwort – barbille nordique

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-2, incidental taxon of *Dare et al. 69* (CANM 10001069).

**Identification.** Plants golden-green to brown, forming compact turfs or growing sparsely among other bryophytes, medium-sized, to 1.2 mm wide and 3 cm long, erect, sparingly branched. Dorsal leaves appressed, succubous, 3-lobed, lobes acute and incurved, sinuses acute, to ½ leaf length; cells strongly

collenchymatous with bulging trigones. Underleaves absent. Specialized asexual reproduction rare, by red gemmae from leaf margins.

As compared with *Trilophozia quinquedentata*, which also has 3-lobed leaves, *N. binsteadii* has more symmetric leaves that are more obliquely inserted and appressed.

**Substrate and habitat.** Among other bryophytes in tundra.

**Notes.** An Arctic-alpine species.

***Orthocaulis cavifolius* H.Buch & S.W.Arnell**
Hollow-leaved notchwort – gorgone à feuilles creuses

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-1, incidental taxon of *Doubt SOI2018-21* (CANM 10001080).

**Identification.** Plants green to red-brown, erect, medium-sized, to 1.1 mm wide and 3 cm long, scarcely branched. Dorsal leaves strongly cupped, transversely inserted, 2(–4)-lobed, lobes obtuse or broadly acute, sinuses acute to acuminate, usually to ⅓ leaf length (rarely more); cells isodiametric with generally convex trigones. Underleaves absent or minute. Specialized asexual reproduction by red-brown, bicellular (or sometimes unicellular) angular gemmae from leaf margins.

*Orthocaulis cavifolius* resembles *Sphenolobus minutus*, which differs in the smaller number of smaller trigones that are, when present, restricted to the proximal part of the leaf; the smaller size of the marginal cells of the leaf lobes; and (when fresh material is available) the smaller number of cellular oil bodies.

**Substrate and habitat.** Among or on other bryophytes in tundra.

**Notes.** An Arctic species.

***Sphenolobus minutus* (Schreb. ex Cranz) Berggr.**
Comb notchwort – petite gorgone

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-1, incidental taxon of *Doubt SOI2018-15* (CANM 10001095).

**Identification.** Plants green to green-brown, erect, medium-sized, to 1.5 mm wide and 3 cm long, scarcely branched. Dorsal leaves strongly cupped, transversely inserted dorsally and obliquely inserted ventrally, 2-lobed, lobes acute-apiculate or obtuse, sinuses acute to acuminate, usually to ⅓ leaf length; cells isodiametric without trigones or with small trigones near leaf base. Underleaves absent. Specialized asexual reproduction by red, 2- to 4-celled angular gemmae from margins of reduced leaves.

In addition to the characteristics noted in the identification under *Orthocaulis cavifolius*, which is superficially very similar, Faubert (2012) also emphasized differences in the size and abundance of gemmae, which are greater in *S. minutus*, where they are produced on more differentiated leaves.

**Substrate and habitat.** Over mesic or wet rock; sometimes on peat.

**Antheliaceae**

***Anthelia juratzkana* (Limpr.) Trevis.**
Juratzka's silverwort – anthélie des neiges

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-1, *Doubt SOI2018-21* (CANM 10001080, det. LML, stet JD).

**Identification.** Plants glaucous grey-green, minute, to 0.5 mm wide and 1 cm long, sparsely branched. Rhizoids common on stems and branches. Dorsal and underleaves similar, erect-appressed, transversely inserted, deeply 2-lobed to ⅘ of leaf length, lobes and sinuses narrowly acute. Specialized asexual reproduction not reported. Sexual condition paroicous.

In colour, *Anthelia* may resemble *Gymnomitrion*, but the leaf shape and arrangement quickly separate them.

**Substrate and habitat.** Associated with seepy rock and debris in late snow sites.

**Cephaloziaceae**

***Fuscocephaloziopsis pleniceps* (Austin) Váňa & L.Söderstr.**
Syn.: *Cephalozia pleniceps* (Austin) Lindb.
Blunt pincerwort – célaphozie trompeuse

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-1, *Doubt SOI2018-20* (CANM 10001100, det. LML, stet JD).

**Identification.** Plants transluscent green, minute, prostrate, to 0.5 mm wide, branched. Leaves long-obliquely to longitudinally inserted, distant, lunate, 2-lobed, lobes mostly triangular-acute, 8–12 cells wide, each tipped with apical cell that is uniformly thin on all cell wall surfaces. Underleaves mostly absent. Specialized asexual reproduction by green, green, ellipsoid, unicellular gemmae on specialized, ascending shoots.

**Substrate and habitat.** Moist peat, organic matter or among other bryophytes.

***Odontoschisma macounii* (Austin) Underw.**
Macoun's flapwort – vénusté cylindrique

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GE-1, *Dansereau 500811-0574D* (NY 80960, det. WCS) • Tingijattut: site TG-1, *Doubt SOI2018-28* (CANM 10001107).

**Identification.** Plants vivid green, medium-sized, prostrate, to 1.1 mm wide, branched; Dorsal leaves imbricate, concave, succubous, rounded-emarginate; marginal cells not strongly differentiated; cell walls unpigmented, trigones often large to confluent (bulging to the point of merging with adjacent trigones). Underleaves large, approaching length of dorsal leaves but much more distant. Specialized asexual reproduction by green, ellipsoid gemmae from erect, specialized shoots.

This Arctic-alpine species is differentiated from other *Odontoschisma* species by its rounded leaves, smooth cuticle, undifferentiated marginal cells, unpigmented cell walls and relatively large underleaves.

**Substrate and habitat.** On moist peat, organic soil or other bryophytes; calciphilic.

**Cephaloziellaceae**

***Cephaloziella varians* (Gottsche) Steph.**
Syn.: *Cephaloziella arctica* Bryhn & Douin ex Müll. Frib.
Arctic threadwort – céphalozielle variable

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Dansereau 500725-0668* (NY 81076, det. WCS as *Cephaloziella arctica*).

**Identification.** Plants green to purplish-brown or black (more deeply pigmented with sun exposure), minute, prostrate, to 0.3 mm wide and 1.2 mm long, sparsely branched. Leaves erect, concave, transversely-inserted, mostly edentate, 2-lobed, lobes obtuse or less often acute, mostly 6–11 cells wide at the base, sinus acute. Underleaves small, to 6 cells long and 4 cells wide, unlobed. Specialized asexual reproduction by purple, ellipsoid, bicellular gemmae from leaf margins.

**Substrate and habitat.** On damp rock, soil or other bryophytes, often with calcareous influence.

**Notes.** The biology of this Arctic-alpine species is unusually well-documented owing to studies by Newsham (2009) in Antarctica, in which this species was characterized as the continent's most abundant liverwort.

**Gymnomitriaceae**

***Gymnomitrion concinnatum* (Lightf.) Corda**
Braided frostwort – gymnomitrion élégant

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-1, *Doubt SOI2018-26* (CANM 10001105), *Doubt SOI2018-27* (CANM 10001106).

**Identification.** Plants whitish or glaucous-green, often forming dense, pure turfs, small, to 0.7 mm wide and 2 cm long, smoothly julaceous. Leaves remarkably densely imbricate, shallowly 2-lobed, lobes acute, sinus open, usually acute; marginal cells isodiametric or a bit obliquely elongate, thick-walled. Underleaves absent. Specialized asexual reproduction not reported.

**Substrate and habitat.** Over open soil or rock in dry to wet exposed sites.

**Notes.** Arctic-alpine species.

***Gymnomitrion coralloides* Nees**
Coral frostwort – gymnomitrion corail

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 52* (NY 75761, det. WCS, US 04628709); site GE-1, *Dansereau 71* (NY 75757, det. WCS).

**Identification.** Plants greyish or silvery, often forming dense, pure turfs, small, to 0.7 mm wide and 2 cm long, smoothly julaceous; shoots clavate shoots, dorsi-ventrally compressed. Leaves remarkably densely imbricate, newer leaves with projecting apical cell that disappears with erosion of leaf margins, shallowly

2-lobed, lobes rounded, sinus open, rounded or acute; marginal cells rectangular, thin-walled, differentiated from those of the leaf interior and eroding with age. Underleaves absent. Specialized asexual reproduction not reported.

**Substrate and habitat.** Over rock or rocky soil in dry to wet exposed sites.

**Notes.** Arctic-alpine species.

***Marsupella arctica* (Berggr.) Bryhn & Kaal.**
Arctic rustwort – marsupelle arctique

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-1, *Doubt SOI2018-13* (CANM 10001083).

**Identification.** Plants reddish to dark red-black, small, to 0.9 mm wide and to 4 cm long; shoots ascending. Dorsal leaves concave, rounded, apex rounded or shallowly retuse, not distinctly 2-lobed. Underleaves absent. Specialized asexual reproduction not reported. Not known to produce sporophytes in North America.

**Substrate and habitat.** Periodically submerged in or emergent from water in open seeps and the edges of water bodies.

**Jungermanniaceae**

***Gymnocolea inflata* (Huds.) Dumort.**
Inflated notchwort – gobelin noir

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-1, incidental taxon of *Doubt SOI2018-9* (CANM 10001089).

**Identification.** Plants olive- to blackish-green, prostrate, branched. Dorsal leaves distant, ovate, entire, 2-lobed, lobes blunt, sinus fairly open, in a rounded V shape, to ⅓ leaf length. Underleaves rarely present, much reduced, few-celled. Specialized asexual reproduction by caducous perianths and rarely by 1- to 2-celled angular gemmae.

**Substrate and habitat.** On open peat and wet rock or soil, associated with seepage and the margins of watercourses and shallowly sloping littoral zones.

**Notes.** This species can form extensive mats that warm in the sun due to the plants' dark colour. Its rounded, inflated perianths (female reproductive structures) detach easily and can contain large air bubbles that allow them to disperse by floating on water.

**Lepidoziaceae**

***Kurzia pauciflora* (Dicks.) Grolle**
Bristly fingerwort – kurzie des tourbières

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-2, incidental taxon of *Dare et al. 69* (CANM 10001069).

**Identification.** Plants pale green, small, to 0.5 mm wide and 2 cm long; shoots prostrate shoots with spreading branches. Dorsal leaves transversely-inserted, reduced, 2–4-lobed, lobes narrow, erect-spreading, slightly curved, 2 to 4 cells wide, at least at base. Underleaves smaller than dorsal leaves but similar in form. Specialized asexual reproduction not reported.

Superficially, *Kurzia pauciflora* looks similar to *Blepharostoma trichophyllum*, which has even narrower, uniseriate, straight leaf lobes. *Kurzia pauciflora* is distinguished from the non-Arctic *K. makinoana* (Steph.) Grolle (syn. *K. sylvatica* A.W.Evans) by characters of the fertile shoots, which were not present in the sparse specimen examined.

**Substrate and habitat.** Moist habitats, shaded or sheltered as a result of intermixing with other bryophyte species.

**Lophoziaceae**

***Trilophozia quinquedentata* (Huds.) Bakalin**
Large notchwort – grand tritomaire

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GL-2, incidental taxon of *Bültmann & Raynolds s.n.* (CANM 10001063) • Tingijattut: site TG-2, incidental taxon of *Dare et al. 70b* (CANM 10001068); site TG-1, incidental taxon of *Doubt SOI2018-20* (CANM 10001100).

**Identification.** Plants green to brownish, robust, to 4 mm wide and 5 cm long. Dorsal leaves dense, wide-spreading, succubous, the ventral insertion more oblique than the dorsal, producing a ruffled appearance, broad, very asymmetrical, 3-lobed, lobes acute-apiculate, sinuses acute, shallow, to ¼ leaf length). Underleaves absent. Specialized asexual reproduction rare, by green or brownish 1- to 2-celled gemmae.

**Substrate and habitat.** On humid rock (particularly calcareous) and soil over rock, in sheltered microhabitats.

**Pseudolepicoleaceae**

***Blepharostoma trichophyllum* (L.) Dumort.**
Hairy threadwort – ciliaire doigts-de-fée

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site AT-1, *Dansereau 152* (NY 74922, det. WCS) • Barnes Plateau S: site GE-1, *Dansereau 74e* (NY 74989, det. WCS) • Tingijattut: site TG-1, *Doubt SOI2018-6* (CANM 10001087), incidental taxon of *Doubt SOI2018-20* (CANM 10001100); site TG-2, incidental taxon of *Dare et al. 69* (CANM 10001069).

**Identification.** Plants pale green, prostrate, small, to 2 cm long and less than 1 mm wide. Leaves transversely-inserted, reduced, 3–4-lobed, lobes uniseriate, erect-spreading. Underleaves smaller than dorsal leaves but similar in form. Specialized asexual reproduction occasional, by single-celled gemmae at lobe tips.

**Substrate and habitat.** Moist habitats, shaded or sheltered as a result of intermixing with other bryophyte species.

**Ptilidiaceae**

***Ptilidium ciliare* (L.) Hampe**
Ciliate fringewort – ptilidie des rochers

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GE-1, *Dansereau 500811-0562* (NY 12093, det. WCS) • Tingijattut: site TG-2, *Dare et al. 67* (CANM 10001072); site TG-1, incidental taxon on *Doubt SOI2018-18* (CANM 10001098).

**Identification.** Plants often golden or rich red-brown with light exposure, robust, to 3 mm wide; shoots ascending, prolifically pinnately branched, often producing puffy, weft-like colonies. Dorsal leaves incubous, distinctly asymmetrical, margins abundantly ciliate, 3(–4)-lobed. Underleaves large, deeply lobed, ciliate.

*Ptilidium pulcherrimum*, which is not a common Arctic species, is smaller, more appressed to its substrate, and has deeper sinuses between the leaf lobes.

**Substrate and habitat.** Over peat, well-drained soil and rock on tundra and stable, sheltered slope microhabitats.

**Notes.** Also known as Northern naugahyde liverwort. Common also in boreal habitats.

**Scapaniaceae**

***Diplophyllum taxifolium* (Wahlenb.) Dumort.**
Yew-leaved earwort – fausse-scapanie commune

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-1, incidental taxon of *Doubt SOI2018-11* (CANM 10001093).

**Identification.** Plants green, small, 5–25 mm long, sparingly branched; shoots very flat. Dorsal leaves spreading, oblong, margins variably denticulate, apex blunt, complicate-2-lobed; cell cuticle verriculose; median similar throughout, not markedly linear-elongate in centre. Underleaves absent. Specialized asexual reproduction by 1- to 2-celled gemmae that are green at maturity.

**Substrate and habitat.** On damp, deeply shaded, stable rock and mineral soil over rock.

***Scapania paludosa* (Müll.Frib.) Müll.Frib.**
Floppy earwort – scapanie des sources

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-1, *Doubt SOI2018-23* (CANM 10001104, det. LML, stet JD).

**Identification.** Plants green to dark reddish (with sun exposure), large, 3–6 mm wide; shoots flattened.

sparingly branched. Dorsal leaves cordate, undulate, entire or slightly denticulate, complicate-2-lobed, dorsal and ventral lobes basally decurrent, apically acute, dorsal lobe to 60% size of ventral, angling only slightly from stem axis, keel sharply folded, arching to point of forming a semi-circle. Underleaves absent. Gemmae absent.

**Substrate and habitat.** On wet rock and other stable mineral substrates in seeps or in / near the margins of flowing water of arctic-alpine habitats.

***Scapania spitsbergensis* (Lindb.) K.Müller**
Spitsbergen earwort – scapanie nordique

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-1, *Doubt SOI2018-22* (CANM 10001101).

**Identification.** Plants green to reddish or brownish (with sun exposure), large, 3–4 mm wide; shoots flattened, sparingly branched. Dorsal leaves: margins toothed, teeth multi-cellular, apical cells strongly elongate, apex complicate-2-lobed, dorsal and ventral lobes basally decurrent (decurrencies toothed continually from the leaf margin), apically rounded, dorsal lobe 50–75% size of ventral, keel sharply folded, arched, winged with acute or dentate lamella. Underleaves absent. Specialized asexual reproduction by 2-celled gemmae that are green to pinkish at maturity.

**Substrate and habitat.** On wet rock and other stable mineral substrates in arctic-alpine habitats.

**Notes.** Often spelled *S. spitzbergensis,* particularly in older literature.

**Lichens**
**Candelariaceae**

***Candelariella canadensis* H.Magn.**

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 3.5, *Gillespie et al. 11857* (CANL 10027022) • Kangiqtualuk Uqquqti: site 28.3, *Gillespie et al. 11657* (CANL 10027023); site 2.1, *Gillespie et al. 11784* (CANL 10027024).

**Identification.** Form – crustose. Thallus consists of bright yellow areoles that are continuous or scattered and granulose. Apothecia present or absent, flat to convex, usually scattered and in clusters, yellow.

The bright yellow thallus, convex yellow apothecia, and substrate of soil or humus make *C. canadensis* distinctive in the park.

**Substrate and habitat.** on soil and humus.

**Cladoniaceae**

***Cladonia amaurocraea* (Flörke) Schaer.**
Quill lichen – cladonie pennée
Figure 84A

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site 31.5, *Gillespie et al. 11768* (CANL 10024561); site BI-1, *Hale 655* (CANL 6584, F C0059826F, WIS-L-0025873) • Ravenscraig Harbour: site RH-1, *Dare 13* (CANL 10023858), *Dare 31* (CANL 10027064) • Refuge Harbour: site 11.1, *Gillespie et al. 12066* (CANL 10027025).

**Identification.** Form – fruticose. Stalked with small cups at the tips. Stalks narrow and sparsely branched and pale yellow-green, due to the production of usnic acid.

This species is distinguished from other awl-shaped *Cladonia* species in the park by its colour, thin stalks, and sparse branching pattern.

**Substrate and habitat.** On soil in dry to wet tundra.

***Cladonia bellidiflora* (Ach.) Schaer.**
Toy soldiers – cladonie vermillon

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Arviqtujuq Kangiqtua NW: site 18.3, *Gillespie et al. 12261* (CANL 10024613) • Refuge Harbour: site 14.1, *Gillespie et al. 12086* (CANL 10024550).

**Identification.** Form – primary thallus squamulose, secondary thallus fruticose. Stalks and leaflets pale yellow-green (containing usnic acid). Leaflets numerous. Fruiting bodies bright red on stalks 4(–5) cm tall; stalks without fruiting bodies with blunt tips.

Other species of *Cladonia* in the park can have bright red fruiting-bodies at the tips of stalks, but they

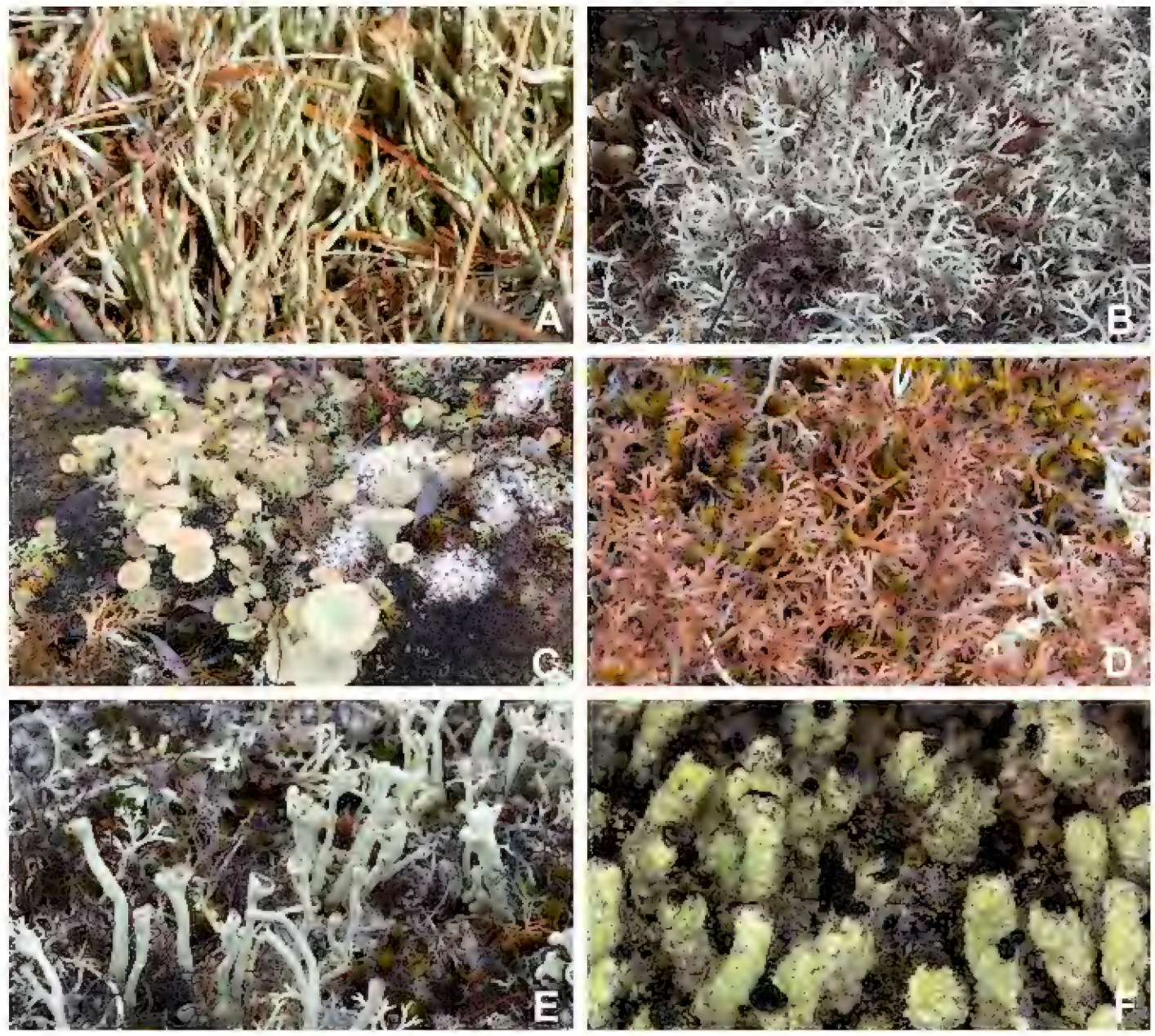


**Figure 84. A.** *Cladonia amaurocraea*, habit. *Gillespie et al. 11768*. **B.** *Cladonia mitis*, habit. *Gillespie et al. 12255*. **C.** *Cladonia pleurota*, habit. *Gillespie et al. 12272*. **D.** *Cladonia rangiferina*. habit. *Gillespie et al. 11571*. **E.** *Cladonia sulphurina*, habit. *Gillespie et al. 11841*. **F.** *Pilophorus cereolus*, habit. *Bültmann & Raynolds s.n.* Photos by P.C. Sokoloff (A–E) and R.T. McMullin (F).

lack the abundant leaflets and they usually have wider cups.

**Substrate and habitat.** On soil and humus, often with moss.

***Cladonia borealis* S.Stenroos**
Boreal cup lichen – cladonie boréale

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 498* (CANL 7104) • Ravenscraig Harbour: site RH-1, *Dare 16* (CANL 10023802), *Dare 38* (CANL 10023799).

**Identification.** Form – primary thallus squamulose, secondary thallus fruticose. Cups goblet-shaped, 10 × 40 mm, covered with small plates or areoles that are clustered or scattered. Fruiting bodies bright red, produced on rims of cups.

*Cladonia coccifera* is similar and the two species cannot confidently be determined in the field. However, they are chemically distinct: *C. borealis* has barbatic and usnic acids and *C. coccifera* has zeorin and usnic acid.

**Substrate and habitat.** On exposed soil.

***Cladonia cenotea* (Ach.) Schaer.**
Powdered cup lichen – cladonie à marges enroulées

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Uqquqti: site 28.3, *Gillespie et al. 11681* (CANL 10027021).

**Identification.** Form – primary thallus squamulose (persisting or disappearing), secondary thallus fruticose. Stalks to 10 cm tall and covered in soredia. Cups multiple on stalks, open in the middle, margins curling inwards.

The sorediate surface throughout and multiple cups with margins that curl inwards make this a distinctive species in Agguttinni.

**Substrate and habitat.** On soil or rotting wood in a wide range of habitats.

***Cladonia coccifera* (L.) Willd.**
Madame's cup lichen – cladonie écarlate

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 498*

(WIS-L-0029765); site 31.4, *Gillespie et al. 11754* (CANL 10027010) • Kangiqtualuk Uqquqti: site 28.3, *Gillespie et al. 11656* (CANL 10024578) • Refuge Harbour: site 11.1, *Gillespie et al. 12082* (CANL 10027028).

**Identification.** Form – primary thallus squamulose, secondary thallus fruticose. Cups goblet-shaped cups, to 12 × 50 mm, covered with small plates or areoles that are clustered or scattered. Fruiting bodies bright red, on rims of cups.

*Cladonia borealis* is so similar to *C. coccifera* that the two species cannot confidently be determined in the field. However, they are chemically distinct: *C. coccifera* has zeorin and usnic acid and *C. borealis* has barbatic and usnic acids.

**Substrate and habitat.** On exposed soil.

***Cladonia cyanipes* (Sommerf.) Nyl.**
Blue-footed cup lichen – cladonie à pied bleu

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GL-9, *Bültmann & Raynolds s.n.* (CANL 10027015).

**Identification.** Form – primary thallus squamulose (persisting or disappearing), secondary thallus fruticose. Stalks simple or sparsely branched, to 7(–8) cm tall and 1.5 mm wide, covered in fine soredia, stalk tips pointed or rarely with minute cups. Barbatic and usnic acids present.

**Substrate and habitat.** On soil rich with humus and on rotting wood.

**Notes.** The usnic acid gives the stalks a pale yellow-greem colour, but the basal regions often have a pale blue hue.

***Cladonia deformis* (L.) Hoffm.**
Lesser sulphur cup lichen – cladonie difforme

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 628* (CANL 7527, WIS-L-0031656).

**Identification.** Form – primary thallus squamulose (disappearing, rarely persisting), secondary thallus fruticose. Cups somewhat irregular and deformed. Stalks yellow-green due to the production of usnic acid, to 5(–8) cm tall, at least the upper half covered in fine soredia. Fruiting bodies bright red, produced on cup margins.

*Cladonia sulfurina* is similar, but it produces squamatic acid in the medulla and it typically has a greater number of perforations near or on the cups. Small or young specimens of *C. deformis* can be similar to *Cladonia pleurota*, which is distinguished by more goblet-shaped cups, granular soredia, and the cups are more regular.

**Substrate and habitat.** On soil, rocks with thin layers of soil, rotting wood and tree bases in a wide range of environments.

***Cladonia gracilis* (L.) Willd. subsp. *gracilis***
Gracile lichen – cladonie grêle

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11809* (CANL 10024557) • Ravenscraig Harbour: site 18.7, *Gillespie et al. 12283* (CANL 10024559).

**Identification.** Form – primary thallus squamulose (disappearing), secondary thallus fruticose. Stalks grey-green, often browning, to 8(–10) cm tall and 1.5(–2) mm wide, surface smooth (soredia absent), tips pointed or rarely producing very narrow cups. Fruiting bodies brown, produced at tips of stalks.

The smooth and pointed stalks are unlike any other species known from Agguttinnii TP.

**Substrate and habitat.** On soil, wood or rocks with thin layers of soil.

***Cladonia luteoalba* A.Wilson & Wheldon**
Lemon cup lichen – cladonie citron

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GL-9, *Bültmann & Raynolds s.n.* (CANL 10027018).

**Identification.** Form – foliose. Primary thallus comprised of undulating lobes that are green-yellow on the upper surface and yellowish on the lower surface. Secondary thallus not seen in the park. With several acids: barbatic, didymic, fumarprotocetraric, porphyrilic, quaesitic, rhodocladonic, squamatic, and usnic. Zeorin also produced.

Distinguished by its distinctive green-yellow to yellowish colour, undulating lobes, and large number of secondary metabolites.

**Substrate and habitat.** On soil, humus, and rock.

***Cladonia macrophylla* (Schaer.) Stenh.**
Fig-leaved cup lichen – cladonie des montagnes

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 631* (CANL 6561, WIS-L-0032795).

**Identification.** Form – primary thallus squamulose (persisting), secondary thallus (stalks) fruticose. Stalks growing from squamules, 10–60 mm tall, up to 5 mm in diameter, cupless, sides fissured, granulose, with continuous or scattered areoles or plates. With psoromic acid.

The plates on the stalks and the psoromic acid are distinctive in the park.

**Substrate and habitat.** On soil, humus, and detritus.

***Cladonia mitis* Sandst.**
Green reindeer lichen – cladonie arbuscule
Figure 84B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Arviqtujuq Kangiqtua NW: site 18.3, *Gillespie et al. 12255* (CANL 10024549) • Atagulisaktalik: site 25.1, *Gillespie et al. 11572* (CANL 10024537) • Barnes Plateau S: site 31.4, *Gillespie et al. 11755* (CANL 10024547); site BI-1, *Hale 476* (CANL 8484, WIS-L-0026427) • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11808* (CANL 10024552) • Refuge Harbour: site 11.1, *Gillespie et al. 12065* (CANL 10024538).

**Identification.** Form – primary thallus crustose (disappearing), secondary thallus fruticose. Stalks yellow-green (usnic acid present), heavily branched, central stems with smaller side branches.

*Cladonia rangiferina* is similar; it is also heavily branched with larger central stems, but it is grey (usnic acid absent).

**Substrate and habitat.** On soil in dry to moist tundra.

**Inuit Qaujimajatuqangit.** None recorded in Nunavut. In Nunavik, *Cladonia rangiferina* is reported to be used for fires, as insulation for meat, and to hide traps (Blondeau et al. 2011).

***Cladonia pleurota* (Flörke) Schaer.**
Red-fruited pixie-cup – cladonie penchée
Figure 84C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Arviqtujuq Kangiqtua NW: site 18.3, *Gillespie et al. 12272* (CANL 10024573) • Atagulisaktalik: site 25.1, *Gillespie et al. 11570* (CANL 10024583), *Gillespie et al. 11571b* (CANL 10024504) • Barnes Plateau S: site 31.4, *Gillespie et al. 11759* (CANL 10024526) • Kangiqtualuk Uqquqti: site 2.1, *Gillespie et al. 11787* (CANL 10024503) • Refuge Harbour: site 11.1, *Gillespie et al. 12083* (CANL 10024584).

**Identification.** Form – primary thallus squamulose (disappearing or persisting), secondary thallus (stalks) fruticose. Stalks forming goblet-shaped cups that are up to 2(–3) cm tall, cover in granular soredia, and are yellow-green (contain usnic acid). Fruiting bodies red, produced on cups margins.

Small specimens of *Cladonia deformis* can be similar, but they have fine soredia and more irregular shaped cups.

**Substrate and habitat.** On soil in dry to moist tundra.

**Notes.** This was the most common cup-forming *Cladonia* encountered in Agguttinni TP.

***Cladonia pyxidata* (L.) Hoffm.**
Pebbled cup lichen – cladonie perlée

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 490* (CANL 9220, WIS-L-0034023).

**Identification.** Form – primary thallus squamulose (persisting), secondary thallus (stalks) fruticose. Comprised of scattered or clusterd basal leaflets and stalks to 3(–6) cm tall. Cups goblet-shaped, often with proliferations from margins, surface covered in rounded plates or areoles that are dense or sparse. Fruiting bodies brown, produced on cup margins.

*Cladonia pocillum* (Ach.) O.J. Rich. is a similar species that occurs on Baffin Island, but it is not known from Agguttinni TP. That species is distinguished by larger basal leaflets that that are more appressed and form a continuous rosette around the stalks, shorter stalks (up to 2 cm tall), and its tendency to grow on basic (non-acidic) substrates.

**Substrate and habitat.** On soil, wood and rocks with thin layers of soil. Usually on acidic substrates. In a wide range of environments.

***Cladonia rangiferina* (L.) F.H.Wigg.**
Grey reindeer lichen – cladonie des rennes – Tingaujaq, Tingaujarlak, Quajautik, Tuttuup niqingit (Blondeau et al. 2011)
Figure 84D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 25.1, *Gillespie et al. 11571a* (CANL 10024570).

**Identification.** Form – primary thallus crustose (disappearing), secondary thallus (stalks) fruticose. Stalks grey (usnic acid absent), heavily branched, branches are fine, central stems with smaller side branches.

*Cladonia mitis* is also heavily branched with larger central stems, but it is yellow-green (usnic acid present).

**Substrate and habitat.** On soil in dry to moist tundra.

**Inuit Qaujimajatuqangit.** None recorded in Nunavut. In Nunavik, *Cladonia rangiferina* is reported to be used for fires, as insulation for meat, and to hide traps (Blondeau et al. 2011).

***Cladonia sulphurina* (Michx.) Fr.**
Greater sulphur-cup lichen – cladonie soufrée
Figure 84E

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Arviqtujuq Kangiqtua NW: site 18.3, *Gillespie et al. 12267* (CANL 10024585) • Kangiqtualuk Agguqti: site 3.3, *Gillespie et al. 11841* (CANL 10024586).

**Identification.** Form – primary thallus squamulose (usually persisting), secondary thallus (stalks) fruticose. Stalks to 5(–8) cm tall and 4(–6) mm wide, cupped. Cups yellow-green (usnic acid present), irregular and deformed, longitudinal perforations common in cup and in stalk near cup, covered in fine soredia. Fruiting bodies red, produced on cup margins.

The similar *Cladonia deformis* also grows in Agguttinni TP. These two species can be separated by viewing them under UV light: the interior (medulla) of *C. sulphurina* fluoresces white-blue under UV, whereas that of *C. deformis* does not. *Cladonia deformis* also has less deformed cups that usually lack perforations.

**Substrate and habitat.** On soil in dry to moist tundra and mossy areas.

***Pilophorus cereolus* (Ach.) Th.Fr.**
Powdered matchstick lichen – pilophore sorédié
Figure 84F

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GL-7, *Bültmann & Raynolds s.n.* (CANL 10027019).

**Identification.** Form – primary thallus crustose and areolate, secondary thallus (stalks) fruticose. Stalks pale grey-green, to 4(–5) mm tall, unbranched, solid, generally with soredia on upper half and areolate on lower half. Cyanobacteria common in pink-brown to black cephalodia between areoles on primary thallus.

This species is distinctive in Agguttinni, but it can be further characterised by its chemistry (atranorin and zeorin).

**Substrate and habitat.** On rock, usually in humid and shaded environments.

**Notes.** This is the first collection of the species known from Nunavut.

**Graphidaceae**

***Diploschistes muscorum* (Scop.) R.Sant.**
Cowpie lichen

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 477* (CANL 2275, MICH 254356, WIS-L-0054474).

**Identification.** Form – crustose. Thallus grey-white, thick, verrucose. Fruiting bodies black, crater-like, embedded in thallus, often with double margin. Asci 4-spored; ascospores brown, muriform.

*Diploschistes scruposus* is very similar and it is also known from Baffin Island. It differs by growing directly on rock and in having 4–8-spored asci.

**Substrate and habitat.** Often starting as a parasite on other lichens, usually *Cladonia* spp. Later free-living on moss and soil.

### Harpidiaceae

***Euopsis pulvinata* (Schaer.) Vain.**
Greater rock licorice lichen – noirelle pulviné

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GL-1, *Bültmann & Raynolds s.n.* (CANL 10027013).

**Identification.** Form – crustose to squamulose. Thallus red-brown, of clustered lobes, areolate, margins wavy to lobulate. Areole surface granular to warty. Apothecia 0.2–0.5 mm in diameter, margins granular, disk red-brown. Ascospores colourless, 1-celled.

A distinctive species in the park. Similar species in the Arctic are distinguished by their smooth surface.

**Substrate and habitat.** On exposed acidic rocks.

### Hygrophoraceae

***Lichenomphalia alpina* (Britzelm.) Redhead, Lutzoni, Moncalvo & Vilgalys**
Alpine mushroom lichen – lichenomphalie alpine

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11800* (CANL 10024510) • Refuge Harbour: site 14.3, *Gillespie et al. 12089* (CANL 10024508) • Tingijattut: site 15.4, *Gillespie et al. 12156* (CANL 10024511).

**Identification.** Form – primary thallus crustose, secondary thallus (stalks) fruticose. Primary thallus green, granular. Reproductive structure a yellow-orange mushroom with a distinct dimple on top and gills running partway down the stipe.

This is one of a few lichen species in Arctic-alpine environments that reproduces by forming a gilled mushroom (Basidiomycetes). *Lichenomphalia hudsoniana* produces similar fruiting-bodies, but its primary thallus is foliose, made-up of discrete blue-green rounded lobes.

**Substrate and habitat.** On moss and soil in dry to moist tundra.

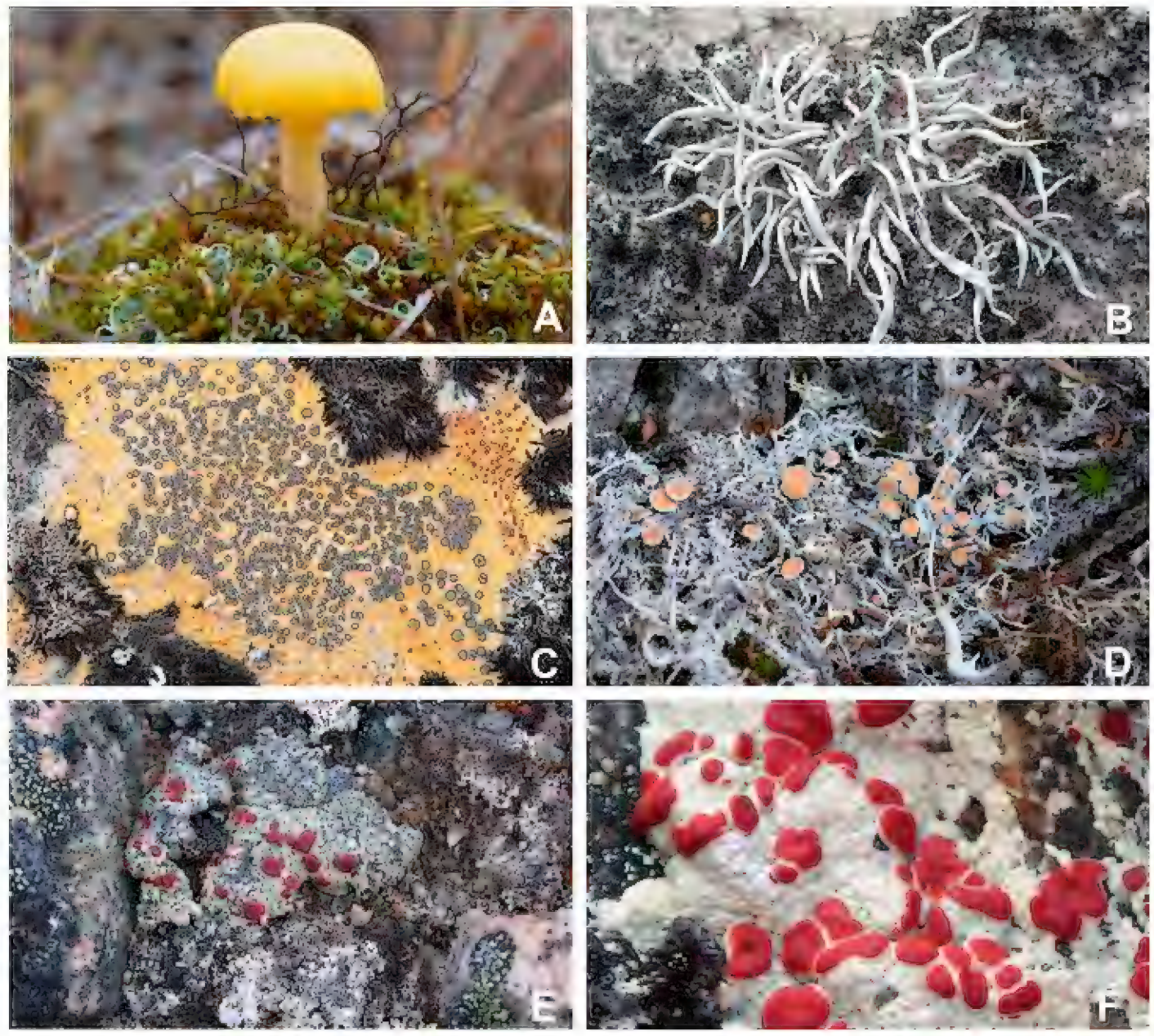


**Figure 85. A.** *Lichenomphalia hudsoniana*, habit, with yellow mushroom above and blue-green thallus immersed in moss below. *Gillespie et al. 12279*. **B.** *Thamnolia subuliformis*, habit. *Gillespie et al. 12005*. **C.** *Porpidea flavicunda*, habit. *McMullin s.n.* Sylvia Grinnell Territorial Park, Baffin Island, NU. **D.** *Ochrolechia frigida*, habit. *Gillespie et al. 11835*. **E.** *Ophioparma lapponica*, habit. *Gillespie et al. 11558*. **F.** *Ophioparma ventosa*, habit. *McMullin s.n.* Sylvia Grinnell Territorial Park, Baffin Island, NU. Photos by P.C. Sokoloff (A, B, D, E) and R.T. McMullin (C, F).

***Lichenomphalia hudsoniana* (H.S.Jenn.) Redhead, Lutzoni, Moncalvo & Vilgalys**
Arctic mushroom scales lichen – lichenomphalie d'Hudson
Figure 85A

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 23.13, *Gillespie et al. 11556a* (CANL 10024505) • Barnes Plateau S: site 31.5 *Gillespie et al. 11771* (CANL 10024509) • Ravenscraig Harbour: site 18.6, *Gillespie et al. 12279* (CANL 10024601).

**Identification.** Form – primary thallus crustose, secondary thallus (stalks) fruticose. Primary thallus consisting of scattered blue-green round lobes on moss and soil. Reproductive structure a yellow-orange mushroom with a distinct dimple on top and gills running partway down the stipe.

*Lichenomphalia alpina* produces similar fruiting bodies, but it has a crustose thallus consisting of a thin, dark green mat rather than discrete blue-green lobes.

**Substrate and habitat.** On moss and soil in dry to moist tundra.

**Hymeneliaceae**

***Ionaspis lacustris* (With.) Lutzoni**
Rusty watercolor lichen – ionaspe lacustre

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 559* (CANL 12098).

**Identification.** Form – crustose. Thallus pale orange, thin. Apothecia immersed, dark orange, concave. Ascospores 1-celled, colourless.

Five other rock dwelling crustose species in the park can also have an orange thallus, but they all grow on drier rocks and either produce soredia or have black apothecia.

**Substrate and habitat.** On acidic rocks that are frequently wet (i.e., along streams or at the edges of lakes).

***Tremolecia atrata* (Ach.) Hertel**
Rusty-rock lichen

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GL-6, *Bültmann & Raynolds s.n.* (CANL 10027020); site BI-1, *Hale 549* (CANL 4958, COLO-L-0044232, O 293240, WIS-L-0099757).

**Identification.** Form – crustose. Thallus dark rusty red-orange, thin. Apothecia immersed, black, concave. Ascospores 1-celled, colourless.

Five other rock dwelling crustose species in the park can also have an orange thallus. *Ionaspis lacustris,* which also has concave and immersed apothecia, has a pale orange thallus, grows on rocks that are frequently wet (e.g., on boulders in streams), and its apothecia are dark orange. *Lecidea lactea* and *L. lapicida* are not typically orange throughout, instead parts of the thallus usually are grey, and their apothecia are not concave. *Porpidia flavicunda*'s apothecia are not concave and they have pruinose disks (appearing frosted). *Porpidia melinodes* produces soredia instead of apothecia.

**Substrate and habitat.** On exposed acidic rock, particularly those containing iron.

**Icmadophilaceae**

***Thamnolia subuliformis* (Ehrh.) W.L.Culb.**
Whiteworm lichen – thamnolie subulée
Figure 85B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Arviqtujuq Kangiqtua NW: site 18.3, *Gillespie et al. 12266* (CANL 10024530) • Atagulisaktalik: site 25.1, *Gillespie et al. 11564* (CANL 10024525) • Barnes Plateau S: site BI-1, *Hale 467* (CANL 17307, WIS-L-0098760) • Kangiqtualuk Agguqti: site 8.4, *Gillespie et al. 12005* (CANL 10024528) • Kangiqtualuk Uqquqti: site 2.1, *Gillespie et al. 11791* (CANL 10024529) • Kuugaaluk: site A22.2, *Gillespie et al. 12454* (CANL 10024527) • Refuge Harbour: site 11.1, *Gillespie et al. 12068* (CANL 10024531).

**Identification.** Form – fruticose. Comprised of white and hollow stalks that are unbranched or sparsely branched and taper to a point.

**Notes.** Common on drier areas in Agguttinni TP. Two chemical varieties are present in the park, one fluoresces under UV light, and the other does not. This species is known as a vagrant lichen and often grows unattached to a substrate.

**Substrate and habitat.** On soil and moss in dry tundra, rocky areas.

### Lecanoraceae

***Lecanora polytropa* (Ehrh.) Rabenh.**
Granite-speck rim lichen – lécanore polytrope

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 551* (CANL 10011708, WIS-L-0076675) • Niaqurnaaluk-Qassialuit: site 18.1, *Gillespie et al. 12239* (CANL 10024580) • Tingijattut: site TG-2, *Dare et al. 94c* (CANL 10027117).

**Identification.** Form – crustose. Thallus of scattered, yellow-green (containing usnic acid) areoles. Apothecia disks waxy yellow to pale orange, with margins that often become thin and inconspicuous. Ascospores, 1-celled, colourless.

A distinctive species in the park.

**Substrate and habitat.** On dry and exposed acidic rocks.

### Lecidaceae

***Lecidea lactea* Flörke *ex* Schaer.**

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 562* (CANL 10010708).

**Identification.** Form – crustose. Thallus grey, becoming orange, often both orange and grey. Apothecia black, flat, without pruina. Ascospores 1-celled, colourless. Norstictic acid present.

**Notes.** There are five other orange rock-dwelling crustose lichens in Agguttinii TP. *Lecidea lactea* and *L. lapicida* are the only ones that are usually not fully orange, do not have concave apothecia, and the apothecia do not have pruina (appearing frosty) on the disks. *Lecidea lapicida* is distinguished by an absence of norstictic acid.

**Substrate and habitat.** On exposed and dry acidic rocks.

***Lecidea lapicida* (Ach.) Ach.**
Gray-orange disk lichen – lécidée tailleur de pierres

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 562* (WIS-L-0078892), *Hale 564* (WIS-L-0078875), *Hale 859* (CANL 10010709).

**Identification.** Form – crustose. Thallus grey, becoming orange, often both orange and grey; norstictic acid absent. Apothecia black, flat, without pruina. Ascospores 1-celled, colourless.

For characters distinguishing this species from the five other orange, rock-dwelling crustose lichens in Agguttinii TP see under *Lecidea lapicida*.

**Substrate and habitat.** On exposed and dry acidic rocks.

***Lecidoma demissum* (Rutstr.) Gotth. Schneid. & Hertel**
Brown earth-crust lichen – lécidome bas

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 654* (CANL 10012171, WIS-L-0080232).

**Identification.** Form – crustose. Thallus dark brown to grey-brown above, black on lower surface, thick, becoming areolate, margins somewhat lobed; no known secondary metabolites. Apothecia dark brown, 0.5–2(–4) mm in diameter, irregularly shaped, following contours of thallus. Ascospores colourless, 1-celled.

A distinctive species in Agguttinnii TP.

**Substrate and habitat.** On exposed soil and decaying vegetarion.

***Porpidia flavicunda* (Ach.) Gowan**
Figure 85C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 561* (WIS-L-0091781).

**Identification.** Form – crustose. Thallus grey, becoming orange, often both orange and grey. Apothecia black, flat, without pruina. Ascospores 1-celled, colourless.

There are five other orange rock-dwelling crustose lichens in the park. *Porpidia flavicunda* is distinguished by its typically fully orange and cracked thallus, apothecia that are mostly flat (i.e., not distinctly concave), and apothecial disks that are pruinose (appearing frosty).

**Substrate and habitat.** On exposed and dry acidic rocks.

***Porpidia melinodes* (Körb.) Gowan & Ahti**

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kuugaaluk: site A22.1, *Gillespie et al. 12450* (CANL 10027030).

**Identification.** Form – crustose. Thallus orange and cracked, with scattered and discrete soralia and grey soredia. Apothecia absent.

This is the only orange crustose species in the park with soredia instead of apothecia.

**Substrate and habitat.** On exposed and dry acidic rocks.

**Lopadiaceae**

***Lopadium pezizoideum* (Ach.) Körb.**
Turban-like urn-disc lichen – lopade faux-pézize

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Ravenscraig Harbour: site RH-1, *Dare 37b* (CANL 10027369).

**Identification.** Form – crustose. Thallus dark olive to brownish, areolate to somewhat squamulose. Apothecia black with thick margins, base constricted. Ascospores 1 per ascus, large (to 105 µm long), heavily muriform.

A distinctive species in the park. The ascospores are unusual among all lichens.

**Substrate and habitat.** On exposed moss, dead vegetation, and soil.

**Ochrolechiaceae**

***Ochrolechia frigida* (Sw.) Lynge.**
Arctic saucer lichen – ochroléchie arctique
Figure 85D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Arviqtujuq Kangiqtua NW: site 18.3, *Gillespie et al. 12252* (CANL 10024515) • Atagulisaktalik: site 23.3, *Gillespie et al. 11509* (CANL 10024516) • Kangiqtualuk Agguqti: site 3.2, *Gillespie et al. 11835* (CANL 10024517) • Refuge Harbour: site 11.1, *Gillespie et al. 12064* (CANL 10027007).

**Identification.** Form – crustose. Thallus white, thin, surface smooth or verruculose, producing spike-like growths. Apothecial disks orange, rough, margins thick, white, sometimes splitting with age. Ascospores 1-celled, colourless.

The narrow spike-like branchlets are characteristic of this species.

**Substrate and habitat.** On moss and plants, sometimes on soil in dry to most tundra.

**Ophioparmaceae**

***Ophioparma lapponica*** (Räsänen) Hafellner & R.W.Rogers
Lapland bloodspot lichen – ophioparme de Laponie
Figure 85E

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 25.1, *Gillespie et al. 11558* (CANL 10024522) • Refuge Harbour: site 11.1, *Gillespie et al. 12072* (CANL 10024521).

**Identification.** Form – crustose. Thallus pale yellow, thick, cracked, areolate (lobate). Apothecia round to irregular with bright red disks. Ascospores colourless, narrow, 4–8-celled, straight, less than 30 µm long.

*Ophioparma ventosa* cannot be distinguished from *O. lapponica* in the field; its primary difference is its curved ascospores that are greater than 30 µm long.

**Substrate and habitat.** On exposed acidic rocks.

***Ophioparma ventosa* (L.) Norman**
Alpine bloodspot lichen – ophioparme venteuse
Figure 85F

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 468* (CANL 12895, WIS-L-0062004).

**Identification.** Form – crustose. Thallus pale yellow, thick, cracked, areolate, somewhat lobate. Apothecia round to irregular with bright red disks. Ascospores colourless, narrow, 4–8-celled, curved, more than 30 µm long.

*Ophioparma lapponica* cannot be distinguished from *O. ventosa* in the field; its primary difference is straight ascospores that are less than 30 µm long.

**Substrate and habitat.** On exposed non-calcareous rocks.

**Pannariaceae**

***Pannaria hookeri* (Borrer) Nyl.**
Hooker's shingle lichen – pannaire de Hooker

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 652* (CANL 2948).

**Identification.** Form – foliose. Thallus with blue-grey lobes. Isidia and soredia absent. Apothecia common on upper surface, disks black, flat, margins same colour as thallus. Photobiont a cyanobacterium.

*Protopannaria pezizoides* is similar, but it often turns brown, the lobes are smaller, and the apothecial disks are red-brown and convex.

**Substrate and habitat.** On non-calcareous rock.

**Notes.** *Pannaria hookeri* is a rare species in North America.

***Protopannaria pezizoides* (Weber) P.M.Jørg. & S.Ekman**
Brown-grey shingle lichen – pannaire compacte

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 652* (WIS-L-0092138).

**Identification.** Form – squamulose. Thallus blue-grey to brown, composed of small and compact overlapping lobes (to 0.5–1 mm wide). Apothecia common, red-brown, becoming convex. Ascospores with warted perispore. Photobiont a cyanobacterium.

*Pannaria hookeri* is similar, but it is usually not as brown, has larger lobes, and its apothecial disks are black and flat. *Psoroma hypnorum* also has a very similar form, but its photobiont is an alga.

**Substrate and habitat.** Usually on exposed soil, less frequently on rock.

***Psoroma hypnorum* (Vahl) Gray**
Green shingle lichen – pannaire verte

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 25.1, *Gillespie et al. 11563* (CANL 10024560) • Barnes Plateau S: site BI-1, *Hale 651* (CANL 10018595, WIS-L-0093096) • Refuge Harbour: site 11.1, *Gillespie et al. 12079* (CANL 10024558).

**Identification.** Form – squamulose. Thallus green or browning, composed of small and compact overlapping lobes (to 0.4–0.5 mm wide). Apothecia common, red-brown, flat or weakly concave. Ascospores ornamented. Photobiont an alga, but cephalodia with cyanobacteria scattered among leaflets.

*Protopannaria pezizoides* has a very similar form, but its primary photobiont is a cyanobacterium.

**Substrate and habitat.** Usually with moss on soil in somewhat moist environments.

**Parmeliaceae**

***Alectoria ochroleuca* (Hoffm.) A.Massal.**
Green witch's hair – alectorie jaune pâle – Tingaujaq, tuttuup niqingit (Blondeau et al. 2011; Clark 2012)
Figure 86A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Arviqtujuq Kangiqtua NW: site 18.3, *Gillespie et al. 12254* (CANL 10024519) • Atagulisaktalik: site 25.1, *Gillespie et al. 11566* (CANL 10024520) • Barnes Plateau S: site 31.4, *Gillespie et al. 11758* (CANL 10024523); site BI-1, *Hale 479* (CANL 10000731, S L61756, WIS-L-0037937) • Refuge Harbour: site 11.1, *Gillespie et al. 12062* (CANL 10024524) • Tingijattut: site TG-2, *Dare et al. 62* (CANL 10023857), *Dare et al. 73* (CANL 10027059).

**Identification.** Form – fruticose. Branches yellow-green (due to the presence of usnic acid), darkening toward the tips, hair-like, with pale, raised pseudocyphellae throughout.

*Gowardia nigricans* is very similar, but it is grey or pale brown with blackened tips; usnic acid is absent.

**Substrate and habitat.** On soil and rock in dry, mossy tundra.

**Inuit Qaujimajatuqangit.** In Nunavik this species may be used as a wick for the qulliq (oil lamp) (Blondeau et al. 2011) and as a combustible (Clark 2012).

**Figure 86. A–B.** *Alectoria ochroleuca*. **A.** Habit. *Gillespie et al. 11566*. **B.** Detail. *McMullin s.n.* Sylvia Grinnell Territorial Park, Baffin Island, NU. **C–D.** *Arctoparmelia centrifuga*. **C.** Head of Kangiqtualuk Agguqti, August 3, 2021. **D.** Detail. *McMullin s.n.* Sylvia Grinnell Territorial Park, Baffin Island, NU. **E.** *Cetraria ericetorum*, habit. *Gillespie et al. 11769a*. **F.** *Cetraria islandica* subsp. *islandica*, habit. *Gillespie et al. 11569*. **G–H.** *Dactylina arctica*. **G.** Habit. *Gillespie et al. 12269*. **H.** Detail. *McMullin s.n.*, Sylvia Grinnell Territorial Park, Baffin Island, NU. Photos by P.C. Sokoloff (A, C, E, F, G) and R.T. McMullin (B, D, H).

***Allantoparmelia alpicola* (Th.Fr.) Essl.**
Greater rock grub lichen – allantoparmélie alpine

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GL-3, *Bültmann & Raynolds s.n.* (CANL 10027016); site BI-1, *Hale 493* (CANL 10000786, WIS-L-0038479).

**Identification.** Form – foliose. Thallus brown to dark brown. Lower surface dark brown to black, lobes thin, closely appressed; upper cortex without atranorin, medulla with alectorialic and barbatolic acids.

Similar to *Brodoa oroarctica*, *Melanelia stygia*, and *Allantoparmelia almquistii* (Vain.) Essl.; the latter species is not known from the park, although it occurs in the region. The most reliable way of distinguishing these species is chemically. *Brodoa oroarctica* has atranorin in the upper cortex and physodic acid in the medulla. *Melanelia stygia* has fumarprotocetraric acid, caperatic acid, or no substances in the medulla. *Allantoparmelia almquistii* has olivetoric acid in the medulla.

**Substrate and habitat.** On exposed rocks.

***Arctocetraria andrejevii* (Oksner) Karnefelt & Thell**
Andrejev's Iceland lichen – arctocétraire d'Andrejev

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Ravenscraig Harbour: site 18.6, *Gillespie et al. 12280* (CANL 10024595).

**Identification.** Form – fruticose or somewhat foliose. Thallus brown, erect, branching sympodial. Branches strongly channeled, tubular, tips distinctly rounded. Pseudocyphellae inconspicuous. With norrangiformic and rangiformic acids.

Some species of *Cetraria* are similar, but none of them have norrangiformic and rangiformic acids or distinctly rounded lobe tips, and most have conspicuous pseudocyphellae. *Arctocetraria nigricascens* has the same secondary metabolites, but it is smaller, typically grows on twigs (occasionally on soil), has dichotomous branching, and the branch tips narrow to point (i.e., are not rounded).

**Substrate and habitat.** On soil in wet conditions such as seepage areas below late snowbanks and along stream banks.

***Arctocetraria nigricascens* (Nyl.) Karnefelt & Thell**
Tentacled Iceland lichen - cétraire à tentacules

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 483* (CANL 10000525, LD 1018320).

**Identification.** Form – fruticose or somewhat foliose. Thallus brown, branching dichotomous. Branch tips narrowing to a point. Pseudocyphellae inconspicuous. With norrangiformic and rangiformic acids.

Some species of *Cetraria* are similar, but none of them have norrangiformic and rangiformic acids and most have conspicuous pseudocyphellae. *Arctocetraria andrejevii* has the same secondary metabolites, but it is larger, typically grows on soil in wet conditions, has sympodial branching, and its branch tips are rounded.

**Substrate and habitat.** Typically on twigs, occasionally on soil.

***Arctoparmelia centrifuga* (L.) Hale**
Concentric-ring lichen – arctoparmélie centrifuge
Figure 86C, D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Uqquqti: site 27.1, *Gillespie et al. 11621* (CANL 10024612).

**Identification.** Form – foliose. Thallus bright yellow to yellow-green (usnic acid present), closely attached, with a white to pale brown lower surface. Soredia absent.

*Arctoparmelia centrifuga* is similar to *A. separata*, which is best distinguished by its grey to black or purplish lower surface. *Arctoparmelia incurva* is also similar but produces soredia in soralia on the upper surface.

**Substrate and habitat.** On exposed non-calcareous rock.

**Notes.** The centre of *A. centrifuga* often dies while new growth persists, creating concentric rings.

***Arctoparmelia incurva* (Pers.) Hale**
Finger-ring lichen – arctoparmélie incurvée

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 484* (CANL 10000855, WIS-L-0041390) • Refuge Harbour: site 11.1, *Gillespie et al. 12073* (CANL 10024563).

**Identification.** Form – foliose. Thallus bright yellow to yellow-green (usnic acid present), closely attached, with a white to pale brown lower surface. Soredia in scattered soralia on the upper surface.

**Notes.** *Arctoparmelia centrifuga* and *A. separata* are similar, but neither produce soredia.

**Substrate and habitat.** On exposed non-calcareous rock.

***Arctoparmelia seperata* (Th.Fr.) Hale**
Rippled-ring lichen – arctoparmélie élancée

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.6, *Gillespie et al. 11971* (CANL 10027036) • Kangiqtualuk Uqquqti: site 2.1, *Gillespie et al. 11785* (CANL 10027037).

**Identification.** Form – foliose. Thallus bright yellow to yellow-green (usnic acid present), with a grey to black or purplish lower surface. Soredia absent.

*Arctoparmelia seperata* is similar to *Arctoparmelia centrifuga*, which is best distinguished by its white to pale brown lower surface. *Arctoparmelia incurva* is also somewhat similar but produces soredia in soralia on the upper surface.

**Substrate and habitat.** On exposed non-calcareous rock, mosses, and humus.

***Brodoa oroarctica* (Krog) Goward**
Mountain sausage lichen – brodoée des montagnes

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 487* (CANL 10001346, WIS-L-0041818).

**Identification.** Form – foliose. Thallus grey to brown; lobes convex, narrow (0.3–2 mm wide), constricted at intervals (sausage-like). Upper surface with maculae; pseudocyphellae absent. Lower surface dark grey to black. Upper cortex with atranorin and physodic acid in the medulla.

*Allantoparmelia alpicola* and *Melanelia stygia* are similar, but they are brown to dark brown and have different chemistry. *Allantoparmelia alpicola* has atranorin in the upper cortex and alectorialic and barbatolic acids in the medulla. *Melanelia stygia* has fumarprotocetraric acid or caperatic acid or no substances in the medulla.

**Substrate and habitat.** On exposed rocks.

***Bryocaulon divergens* (Ach.) Kärnefelt**
Northern foxhair lichen – bryocaule de la toundra

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 625* (CANL 10001494, WIS-L-0042256).

**Identification.** Form – fruticose. Branches red-brown, stiff, coarse (i.e., divergent), to 7(–9) cm long, round, flat near the axils, 0.2–0.5(–1) mm wide. Pseudocyphellae along the branches, white, raised. Medulla and pseudocyphellae with olivetoric and physodic acids.

A distinctive species in Agguttinni TP. *Bryoria nitidula* (Th.Fr.) Brodo & D. Hawksw. is similar and occurs nearby on Baffin Island, but it is darker brown, its pseudocyphellae are brown and inconspicuous, and fumarprotocetraric acid is produced in the medulla.

**Substrate and habitat.** On soil and vegetation in heath environments.

***Cetraria ericetorum* Opiz.**
Iceland lichen – cétraire des bruyères
Figure 86E

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site 31.5, *Gillespie et al. 11769a* (CANL 10024581).

**Identification.** Form – fruticose. Thallus brown. Branches vertical and horizontal, flat in cross section, margins curling in and becoming channeled or tubular. Pseudocyphellae white, marginal, somewhat continuous, rare on the surface. Pycnidia at the tips of spike-like marginal projections. Fumarprotocetraric acid absent.

This species resembles *Cetraria islandica*, which is more common in the park, but that species produces fumarprotocetraric acid and pseudocyphellae are common on the surface.

**Substrate and habitat.** On soil, often among moss.

***Cetraria islandica* (L.) Ach. subsp. *islandica***
Iceland lichen – ccétraire d'Islande
Figure 86F

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 25.1, *Gillespie et al. 11569* (CANL 10024577).

**Identification.** Form – fruticose. Thallus brown. Branches vertical and horizontal, flat in cross section, surface smooth, margins curling in and becoming channeled, to 10 × 1 –2.5 cm. Pseudocyphellae white, conspicuous, common on the surface, discontinuous along the branch margins. Fumarprotocetraric acid present.

*Cetraria islandica* subsp. *crispiformis* is the more common subspecies in Agguttinnii TP; it differs from subsp. *islandica* in being smaller (up to 6 cm × 5 mm), the lower surface is more ridged and pitted, pseudocyphellae are smaller and inconspicuous, and the branches become more tubular.

**Substrate and habitat.** On soil and heath.

***Cetraria islandica* subsp. *crispiformis* (Räsänen) Kärnefelt**
Curly Iceland lichen – cétraire crispiforme – Tingaujaq (Blondeau et al. 2011)

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Arviqtujuq Kangiqtua NW: site 18.3, *Gillespie et al. 12270* (CANL 10024567) • Atagulisaktalik: site 22.1, *Gillespie et al. 11478b* (CANL 10024569) • Barnes Plateau S: site 31.5, *Gillespie et al. 11769b* (CANL 10024587); site BI-1, *Hale 483* (WIS-L-0044643) • Kangiqtualuk Agguqti: site 3.2, *Gillespie et al. 11822* (CANL 10024518) • Refuge Harbour: site 11.2, *Gillespie et al. 12026* (CANL 10024564).

**Identification.** Form – fruticose. Thallus brown. Branches vertical and horizontal, flat in cross section, surface ridged and pitted, margins curling in and becoming tubular, to 6 cm × 5 mm. Pseudocyphellae white,

inconspicuous, on the surface, discontinuous along the branch margins. Fumarprotocetraric acid present.

*Cetraria islandica* subsp. *islandica* is similar but differs in being larger (to 10 × 1 –2.5 cm) and having a more or less smooth lower surface, pseudocyphellae that are larger and more conspicuous, and branches that are less tubular.

**Substrate and habitat.** On soil and heath.

***Cetraria laevigata* Rass.**
Striped Iceland lichen – cétraire lisse

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Refuge Harbour: site 11.1, *Gillespie et al. 12076* (CANL 10024565).

**Identification.** Form – fruticose. Thallus brown. Branches vertical and horizontal, flat in cross section, narrow (1–3 mm wide), surface smooth. Pseudocyphellae conspicuous, mostly marginal and continuous. Fumarprotocetraric acid present.

*Cetraria islandica* is similar and also has fumarprotocetraric acid, but its pseudocephellae are mostly on the surface and those on the margins are broken up (not continuous), and it usually has wider lobes.

**Substrate and habitat.** On soil and heath.

***Cetraria nigricans* Nyl.**
Blackened Iceland lichen – cétraire noirâtre

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Arviqtujuq Kangiqtua NW: site 18.3, *Gillespie et al. 12258* (CANL 10024593) • Atagulisaktalik: site 22.3, *Gillespie et al. 11502* (CANL 10024566) • Barnes Plateau S: site BI-1, *Hale 496* (CANL 10002586, WIS-L-0045159) • Refuge Harbour: site 11.1, *Gillespie et al. 12077* (CANL 10024592).

**Identification.** Form – fruticose. Thallus dark brown to almost black. Branches vertical and horizontal, flat in cross section, relatively small (less than 2 cm high), margins with long cilia that often branch. Fumarprotocetraric acid absent.

This species is similar to other species of *Cetraria*, but it is distinguished by its small size, dark thallus, and long cilia.

**Substrate and habitat.** On soil and heath.

***Cetrariella delisei* (Bory *ex* Schaer.) Karnefelt & Thell**
Snowbed northern lichen – cétrarielle delicate

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 25.1, *Gillespie et al. 11565* (CANL 10024579) • Barnes Plateau S: site BI-1, *Hale 481* (CANL 10002961, COLO-L-0008974, F C0061758F, MICH 76683, WIS-L-0045300) • Ravenscraig Harbour: site RH-1, *Dare 41* (CANL 10023834).

**Identification.** Form – fruticose. Thallus pale to dark brown. Branches vertical and horizontal, flat in cross section, to 5(–9) cm tall, finely branched near tips, margins curling, becoming channeled. Pseudocyphellae white, marginal and on surface. Fumarprotocetraric acid absent, gyrophoric acid present.

*Cetrariella delisei* is similar to species of *Cetraria* but is distinguished by its finely branched lobe tips and the production of gyrophoric acid.

**Substrate and habitat.** On exposed soil and rock.

***Cetrariella fastigiata* (Delise ex Nyl.) Karnefelt & Thell**
Greater ruffled northern lichen – cétrarielle tubulaire

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.1, *Gillespie et al. 11478* (CANL).

**Identification.** Form – fruticose. Thallus dark brown to grey-brown, dichotomously branched. Branches vertical and horizontal, flat in cross section, smooth and pitted, becoming subtubular, with short lateral branches. Pseudocyphellae inconspicuous. Fumarprotocetraric acid absent, gyrophoric acid present.

This species is similar to species of *Cetraria* but distinguished by its dichotomous branching, inconspicuous pseudocyphellae, and the production of gyrophoric acid.

**Substrate and habitat.** On exposed soil and rock, usually in moist depressions.

***Dactylina arctica* (Hook.f.) Nyl.**
Arctic finger lichen – dactyline arctique
Figure 86G, H

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Arviqtujuq Kangiqtua NW: site 18.3, *Gillespie*

*et al. 12269* (CANL 10024514) • Atagulisaktalik: site 22.1, *Gillespie et al. 11474* (CANL 10024513) • Barnes Plateau S: site BI-1, *Hale 466* (CANL 16053, WIS-L-0048959) • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11806* (CANL 10024512); site 21.11, *Gillespie et al. 12437* (CANL 10024506) • Refuge Harbour: site 11.1, *Gillespie et al. 12063* (CANL 10024507).

**Identification.** Form – fruticose. Thallus pale yellow to pale brown, lobed, lobes multiple, erect, usually unbranched, occasionally sparsely branched, hollow, finger-like; walls thin. Apothecia usually absent. Pruina absent.

*Dactylina ramulosa* is somewhat similar, but it is smaller, pale grey-brown to purple, with pruina (giving it a frosty appearance), and is usually branched.

**Substrate and habitat.** On soil. Often among moss in moist depressions.

***Dactylina ramulosa* (Hook.) Tuck.**
Frosted finger lichen – dactyline rameuse

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.1, *Gillespie et al. 11475* (CANL 10024575) • Barnes Plateau S: site BI-1, *Hale 464* (CANL 16122, WIS-L-0049228) • Marble Lake: site 31.2, *Gillespie et al. 11744* (CANL 10024574) • Refuge Harbour: site 11.1, *Gillespie et al. 12069* (CANL 10024594).

**Identification.** Form – fruticose. Thallus pale grey-brown to purple, branched. Branches with pruina (giving it a frosty appearance) and a webby somewhat hollow interior.

**Notes.** *Dactylina arctica* can be similar, but it is larger, pale yellow to pale brown, distinctly hollow, does not produce pruina, and is less branched.

**Substrate and habitat.** On calcareous soil and gravel.

***Flavocetraria cucullata* (Bellardi) Kärnefelt & Thell**
Curled snow lichen – cétraire à capuchons
Figure 87A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Arviqtujuq Kangiqtua NW: site 18.3, *Gillespie et al. 12253* (CANL 10024554), *Gillespie et al. 12271* (CANL 10024597) • Atagulisaktalik: site 25.1, *Gillespie et al. 11557* (CANL 10024555) • Barnes Plateau S: site BI-1, *Hale 475* (WIS-L-0046780) • Kangiqtualuk Agguqti:

**Figure 87. A–B.** *Flavocetraria cucullata*. **A.** Detail. *Gillespie et al. 11557*. **B.** Habit. *McMullin s.n.* Sylvia Grinnell Territorial Park, Baffin Island, NU. **C–D.** *Flavocetraria nivalis*. **C.** Detail. *Gillespie et al. 11805*. **D.** Habit. *McMullin s.n.*, Sylvia Grinnell Territorial Park, Baffin Island, NU. **E.** *Pseudephebe pubescens*, habit. *McMullin s.n.*, Sylvia Grinnell Territorial Park, Baffin Island, NU. **F.** *Vulpicida tilesii*, habit. *Gillespie et al. 11897*. Photos by P.C. Sokoloff (A, C, F) and R.T. McMullin (B, D, E)

site 3.1, *Gillespie et al. 11807* (CANL 10024556) • Kangiqtualuk Uqquqti: site 2.1, *Gillespie et al. 11786* (CANL 10024551) • Refuge Harbour: site 11.1, *Gillespie et al. 12016* (CANL 10024553) • Tingijattut: site TG-2, *Dare et al. 64* (CANL 10027085).

**Identification.** Form – fruticose or somewhat foliose. Thallus yellow-green (usnic acid present), erect, sparsely and irregularly branched. Lobes smooth, margins ruffled, strongly curled, becoming tubular.

*Flavocetraria nivalis* is similar and is the same colour, but its lobes are wrinkled and they do not become tubular. The two *Flavocetraria* species often occur together in the park.

**Substrate and habitat.** On soil and among moss.

***Flavocetraria nivalis* (L.) Kärnefelt & Thell.**
Crinkled snow lichen – cétraire des neiges – Nirnait (Burt et al. 2010)
Figure 87C, D

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Arviqtujuq Kangiqtua NW: site 18.3, *Gillespie et al. 12257* (CANL 10024604) • Atagulisaktalik: site 25.1, *Gillespie et al. 11556b* (CANL 10024596) • Barnes Plateau S: site 31.4, *Gillespie et al. 11757* (CANL 10024614); site BI-1, *Hale 474* (WIS-L-0047336) • Kangiqtualuk Agguqti: site 3.1, *Gillespie et al. 11805* (CANL 10024608) • Kangiqtualuk Uqquqti: site 2.1, *Gillespie et al. 11788* (CANL 10024603) • Kuugaaluk: site A22.2, *Gillespie et al. 12453* (CANL 10024606) • Refuge Harbour: site 11.1, *Gillespie et al. 12061* (CANL 10024605) • Tingijattut: site TG-2, *Dare et al. 65* (CANL 10027084).

**Identification.** Form – foliose. Thallus yellow-green (usnic acid present), irregularly branched. Lobes wrinkled, with black pycnidia on margins.

*Flavocetraria cucullata* is similar and is the same colour, but its lobes are smooth and curl, becoming tubular. The two *Flavocetraria* species often occur together in the park.

**Substrate and habitat.** On soil and among moss.

**Inuit Qaujimajatuqangit.** *Flavocetraria nivalis* is recorded as being an important caribou food (Burt et al. 2010).

***Gowardia nigricans* (Ach.) Halonen, Myllys, Velmala & Hyvärinen**
Grey witch's-beard lichen – gowardie noirâtre – Tingaujaq (Blondeau et al. 2011)

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 480* (CANL 10000146, WIS-L-0038705) • Ravenscraig Harbour: site RH-1, *Dare 21* (CANL 10027058), *Dare 22* (CANL 10023826).

**Identification.** Form – fruticose. Thallus of hair-like branches that are grey with blackened tips (usnic acid absent, alectorialic acid present). Pseudocyphellae white, conspicuous, flush or slightly raised.

*Alectoria ochroleuca* is very similar, but its branches are yellow-green (usnic acid present) with blackening tips.

**Substrate and habitat.** On soil and rock in dry, mossy conditions.

**Inuit Qaujimajatuqangit.** When dry, this lichen is used as tinder or fuel for fires (Burt et al. 2010).

***Melanelia hepatizon* (Ach.) Thell**
Rimmed camouflage lichen – mélanélie marginale

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 495* (CANL 10012944, WIS-L-0081197) • Refuge Harbour: site 11.1, *Gillespie et al. 12080* (CANL 10027008).

**Identification.** Form – foliose. Thallus brown, closely attached. Lobes concave with raised margins, shiny near the tips, lower surface black. Pseudocyphellae white, conspicuous, mostly on the lobe margins. Sticitc acid presnt.

*Melanelia stygia* is similar, but its lobes are convex and the margins are not raised, its pseudocyphellae are mostly on the surface, and it produces fumarprotocetraric acid, caperatic acid, or no secondary metabolites.

**Substrate and habitat.** On exposed non-calcareous rock.

***Melanelia stygia* (L.) Essl.**
Alpine camouflage lichen – mélanélie alpine

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 858* (CANL 14062, US 355685).

**Identification.** Form – foliose. Thallus brown, closely attached. Lobes convex, margins not raised. Pseudocyphellae mostly on lobe surface. Fumarprotocetraric acid or caperatic acid present, or secondary metabolites absent.

*Melanelia hepatizon* is similar, but its lobes are concave and the margins are raised, its pseudocyphellae are mostly on the margins, and it produces stictic acid.

**Substrate and habitat.** On exposed non-calcareous rock.

***Parmelia omphalodes* (L.) Ach.**
Smoky shield lichen – parmélie maculée

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Ravenscraig Harbour: site RH-1, *Dare 37a* (CANL 10027368) • Tingijattut: site TG-2, *Dare et al. 61* (CANL 10023835).

**Identification.** Form – foliose. Thallus pale green-grey to blue-grey, often darkening; lower surface black. Lobes overlapping, tips somewhat truncated. Soredia absent. Pseudocyphellae on surface, reticulate. Medulla with salazinic acid.

*Parmelia sulcata* is distinguished by the presence of soredia. *Parmelia skultii* differs in producing norstictic acid in the medulla and having marginal pseudocyphellae.

**Substrate and habitat.** On soil and rock.

***Parmelia skultii* Hale**
Skult's shield lichen – parmélie de Skult

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Niaqurnaaluk-Qassialuit: site 18.1, *Gillespie et al. 12240* (CANL 10027035).

**Identification.** Form – foliose. Thallus pale green-grey, often darkening; lower surface black. Soredia absent. Pseudocyphellae on margins. Medulla with norstictic acid and salazinic acid.

*Parmelia sulcata* is similar, but that species has soredia, pseudocyphellae on the upper surface, and it lacks norsticic acid. *Parmelia omphalodes* is also similar, but it has pseudocyphellae on the upper surface and lacks norstictic acid.

**Substrate and habitat.** On soil and rock.

***Parmelia sulcata* Taylor**
Hammered shield lichen – parmélie à sillons

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 485* (CANL 10015532, WIS-L-0057208) • Marble Lake: site 31.I, *Gillespie et al. 11736* (CANL 10027026).

**Identification.** Form – foliose. Thallus pale green-grey to blue-grey, often darkening; lower surface black. Soredia present on upper surface and lobe margins. Pseudocyphellae on surface, reticulate. Medulla with salazinic acid.

*Parmelia omphalodes* and *P. skultii* are distinguished from *P. sulcata* by a lack of soredia.

**Substrate and habitat.** On soil and rock.

***Pseudephebe minuscula* (Nyl.** *ex* **Arnold) Brodo & D.Hawksw.**
Coarse rockwool lichen – pseudéphèbe minuscule

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Arviqtujuq Kangiqtua NW: site 18.3, *Gillespie et al. 12265* (CANL 10024534) • Barnes Plateau S: site BI-1, *Hale 840* (CANL 10018437, WIS-L-0092411).

**Identification.** Form – fruticose. Thallus dark brown to almost black, closely appressed. Branches filamentous, round to flat, fine, 0.2–0.5 mm wide, distance between axils of branches 0.2–0.5 (–1.0) mm.

*Pseudephebe pubescens* is very similar, but it has finer, rounder, and longer branches, is not as closely appressed, and the distance between the axils is longer (1–3 mm).

**Substrate and habitat.** On a range of rock types.

***Pseudephebe pubescens* (L.) Choisy**
Fine rockwool lichen – Pseudéphèbe pubescente
Figure 87E

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 25.1, *Gillespie et al. 11562* (CANL 10024535) • Barnes Plateau S: site BI-1, *Hale 861* (CANL 10018518, WIS-L-0092532) • Refuge Harbour: site 11.1, *Gillespie et al. 12075* (CANL 10024536).

**Identification.** Form – fruticose. Thallus dark brown to almost black. Branches filamentous, cylindrical, fine, 0.1–0.2 mm wide, distance between axils of branches 1–3 mm.

*Pseudephebe minuscula* is very similar, but some branches are flatter, it is more closely appressed, and the distance between the axils is shorter (0.2–0.5–1.0 mm).

**Substrate and habitat.** On a range of rock types.

***Vulpicida tilesii* (Ach.) J.-E.Mattsson & M.J.Lai**
Limestone sunshine lichen – vulpicide calcaire
Figure 87F

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GL-5, *Bültmann & Raynolds s.n.* (CANL 10027014) • Kangiqtualuk Agguqti: site 7.2, *Gillespie et al. 11897* (CANL 10024572) • Kangiqtualuk Uqquqti: site 2.1, *Gillespie et al. 11789* (CANL 10024571).

**Identification.** Form – minutely foliose. Thallus distinctively bright yellow, forming rounded mounds on dry soil and gravel. Lobes thin, overlapping, smooth, with small black pycnidia along margins.

This species many be mistaken for *Flavocetraria nivalis*, but *V. tilesii* is a much deeper shade of yellow and has smooth lobes.

**Substrate and habitat.** On calcareous soil and gravel; it is a good indicator of calcareous substrates.

**Peltigeraceae**

***Peltigera aphthosa* (L.) Willd.**
Common freckle pelt lichen – peltigère aphteuse

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Arviqtujuq Kangiqtua NW: site 18.3, *Gillespie et al. 12273* (CANL 10027027) • Barnes Plateau S: site BI-1, *Hale 462* (CANL 10015971, WIS-L-0061510) • Ravenscraig Harbour: site RH-1, *Dare 30* (CANL 10027128) • Refuge Harbour: site 14.1, *Gillespie et al. 12087* (CANL 10027029) • Tingijattut: site TG-2, *Dare et al. 63* (CANL 10027060).

**Identification.** Form – foliose. Thallus large (to 15–20 cm wide). Lobes to 30(–50) mm wide, weakly ruffled near the margins. Upper surface grey-green when dry, bright green when wet, often browning when exposed, with dark scattered cephalodia (appearing freckle-like). Lower surface white or pale brown near the margins then abruptly black toward centre.

*Peltigera aphthosa* is distinguished from other *Peltigera* species in the park by its green upper surface and scattered cephalodia.

**Substrate and habitat.** On soil, usually with moss in moist or humid conditions.

***Peltigera didactyla* (With.) J.R.Laundon**
Alternated pelt lichen – peltigère didactyle

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 461* (CANL 10016099, WIS-L-0063463).

**Identification.** Form – foliose. Thallus brown-grey. Lobes strongly concave, to 10 mm wide. Upper surface with discrete soredia when young; when mature, soredia disappear but scars usually remain. Rhizines not branched near margins.

The concave lobes and soredia make this a distinctive species in the park.

**Substrate and habitat.** On soil in sheltered and exposed conditions.

***Peltigera rufescens* (Weis) Humb.**
Field pelt lichen – peltigère retroussée

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 497* (CANL 10016947, WIS-L-0065011).

**Identification.** Form – foliose. Thallus grey to brown. Lobes 5–10 (–15) mm across, margins strongly upturned. Upper surface with dense tomentum. Rhizines thick tufts of hyphae that coalesce into continuous mat.

The lack of soredia, heavy tomentum on the upper surface, and bushy coalescing rhizines are distinctive.

**Substrate and habitat.** Usually on well-drained soil.

***Peltigera scabrosa* Th.Fr.**
Scabby pelt lichen – peltigère rude

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 629* (COLO-L-0032300, DUKE 186277, S L26163, WIS-L-0065376).

**Identification.** Form – foliose. Thallus blue-grey to brown, to 10(–20) cm wide. Lobes to 30(–40) mm wide, margins upturned or flat. Upper surface scabrose, tomentum absent. Lower surface dark brown to black, white to pale brown near the margins; veins flat. Rhizines dark brown to black, tufted.

The large lobes and scabrose upper surface make this species distinctive in the park.

**Substrate and habitat.** On soil among moss, usually in humid or moist conditions.

***Solorina crocea* (L.) Ach.**
Orange chocolate chip lichen – solorine safran
Figure 88A, B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.1, *Gillespie et al. 11476* (CANL 10024545) • Barnes Plateau S: site 31.4, *Gillespie et al. 11760* (CANL 10024548); site BI-1, Hale 473 (CANL 3479, COLO-L-0041649, WIS-L-0096680) • Kangiqtualuk Agguqti: site 3.5, *Gillespie et al. 11856* (CANL 10024544) • Ravenscraig Harbour: site 18.7, *Gillespie et al. 12285* (CANL 10024543) • Refuge Harbour: site 11.1, *Gillespie et al. 12067* (CANL 10024546).

**Identification.** Form – foliose. Upper surface green, lower surface bright orange (lobe edges frequently curl up and show orange colour). Apothecia brown, large, immersed in upper surface.

This species is common throughout the park. The bright orange lower surface is distinctive.

**Substrate and habitat.** On soil, usually in humid or moist conditions.

**Pertusariaceae**

***Lepra dactylina* (Ach.) Hafellner**
Finger wart lichen – pertusaire dactylique
Fgure 88C

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 22.3, *Gillespie et al. 11501* (CANL 10024532) • Ravenscraig Harbour: site RH-1, *Dare 27* (CANL 10027086) • Refuge Harbour: site 11.1, *Gillespie et al. 12071* (CANL 10024533).

**Identification.** Form – crustose. Thallus of white coral-like isidia 0.3–0.8 × 0.5–2(–7) mm, constricted at the base. Apothecia at tips of isidia, disks pruinose. Fumarprotocetraric acid present.

The long, thick, white isidia make *Lepra dactylina* distinctive in the park.

**Substrate and habitat.** on soil in a wide range of environments.

***Lepra pangyra* (Ach.) Hafellner**
Arctic wart lichen
Figure 88D, E

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 642* (CANL 11502, WIS-L-0067327).

**Identification.** Form – crustose. Thallus white to blue-grey, forming hemispherical to cylindrical warts 0.4–1 mm in diameter. Apothecia produced at tips of warts. No known secondary metabolites.

*Lepra dactylina* can be somewhat similar, but it has a whiter thallus, longer isidia, and produces fumarprotocetraric acid.

**Substrate and habitat.** On vegetation and debris.

***Pertusaria geminipara* (Th.Fr.) C.Knight ex Brodo**

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site GL-9, *Bültmann & Raynolds s.n.* (CANL 10027017).

**Identification.** Form – crustose. Thallus white, thin, with subglobose verrucules that form apical soredia. With alectorialic and barbatolic acids.

Species of *Ochrolechia* can be similar, but they have different secondary metabolites, usually gyrophoric acid.

**Substrate and habitat.** On soil and bryophytes.

**Figure 88. A–B.** *Solorina crocea*. **A.** Habit. *Gillespie et al. 11476*. **B.** Detail. *McMullin s.n.*, Sylvia Grinnell Territorial Park, Baffin Island, NU. **C.** *Lepra dactylina*, habit. *McMullin s.n.*, Sylvia Grinnell Territorial Park, Baffin Island, NU. **D–E.** *Lepra pangyra*. **D.** Habit. *McMullin s.n.*, Sylvia Grinnell Territorial Park, Baffin Island, NU. **E.** *Sphaerophorus globosus*, habit. *Gillespie et al. 11559*. **F.** *Stereocaulon alpinum*, habit. *Gillespie et al. 11560*. **G.** *Polycauliona candelaria*, habit. *Gillespie et al. 11738*. **H.** *Rusavskia sorediata*, habit. *McMullin s.n.*, Sylvia Grinnell Territorial Park, Baffin Island, NU. Photos by P.C. Sokoloff (A, E, F, G) and R.T. McMullin (B, C, D, H).

***Pertusaria oculata* (Dicks.) Th.Fr.**

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 724* (CANL 11492).

**Identification.** Form – crustose. Thallus grey to ash-grey, thin, smooth to slightly warty, continuous, with cylindrical isidia that have dark tips. Fumarprotocetraric and gyrophoric acids present, the latter often scant.

This species is similar to *Lepra dactylina*, but the latter species is whiter, its isidia are more compact, and it does not produce gyrophoric acid.

**Substrate and habitat.** One humus and debris.

**Physciaceae**

***Rinodina turfacea* (Wahlenb.) Körb.**
Tundra pepper-spore lichen – Rinodine de la toundra

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 747* (CANL 18574, WIS-L-0096172).

**Identification.** Form – crustose. Thallus grey-white to brown-grey, thin and inconspicuous to thick and verrucose. Apothecia common, rims same colour as thallus. Ascospores brown, 2-celled.

Apothecial rims the same colour as the thallus and 2-celled, brown ascospores make this species distinctive in the park.

**Substrate and habitat.** On moss, debris, and wood.

**Rhizocarpaceae**

***Rhizocarpon copelandii* (Körb.) Th.Fr.**
Copeland's map lichen

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 745* (CANL 10018687, WIS-L-0093941).

**Identification.** Form – crustose. Thallus ash grey with black hypothallus, areolate, areoles round or angular and convex or flat. Apothecia common, black, flat to convex, margin thick. Epithecium green-black, thick. Ascospores 2-celled, becoming dark blue-black. With norstictic acid.

This is the only species in the park with an ash-grey, areolate thallus and 2-celled, dark ascospores.

**Substrate and habitat.** On non-calcareous rocks.

***Rhizocarpon expallescens* Th.Fr.**

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 728* (CANL 10018716, SBBG000918L, US 4546699, WIS-L-0094137).

**Identification.** Form – crustose. Thallus white to bluish white or lead-coloured, areolate to verruculose-areolate, areoles round to somewhat angular, flat to convex; hypothallus black, usually poorly developed. Apothecia round to angular, flat, becoming weakly convex, margin thin or disappearing. Ascospores 2-celled, colourless.

Distinguished in the park by its areolate thallus and colourless, 2-celled ascospores.

**Substrate and habitat.** On non-calcareous rocks.

***Rhizocarpon geographicum* (L.) DC.**
Yellow map lichen – Rhizocarpe géographique

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Gibbs esker: site 20.12, *Gillespie et al. 12404* (CANL 10024568) • Tingijattut: site TG-2, *Dare et al. 92* (CANL 10027062).

**Identification.** Form – crustose. Thallus areolate; hypothallus black, conspicuous. Areoles bright yellow, dispersed or continuous, flat to convex. Apothecia black with thin black margins, between areoles. Ascospores muriform, dark brown. With rhizocarpic acid, occasionally also with psoromic acid.

*Rhizocarpon superficiale* is similar externally, but it has 2-celled ascospores.

**Substrate and habitat.** On exposed non-calcareous rock.

***Rhizocarpon superficiale* (Schaer.) Vain.**
Superficial map lichen – rhizocarpe superficiel

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 567* (WIS-L-0095159).

**Identification.** Form – crustose. Thallus areolate; hypothallus black, conspicuous. Areoles bright yellow, dispersed or continuous, concave to convex. Apothecia black with thin black margins, between areoles. Ascospores 2-celled, dark brown. With rhizocarpic and stictic acids, rarely with psoromic acid.

*Rhizocarpon geographicum* is similar externally, but it is best distinguished by its muriform ascospores.

**Substrate and habitat.** On exposed non-calcareous rock.

**Sphaerophoraceae**

***Sphaerophorus fragilis* (L.) Pers.**
Fragile coral lichen – sphérophore fragile

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Ravenscraig Harbour: site RH-1, *Dare 28* (CANL 10023829).

**Identification.** Form – fruticose. Thallus yellow-brown to red-brown, becoming shiny when exposed, branching dichotomous. Branches all with similar diameter, 0.3–0.8 mm wide. Hypothamnolic acid and sphaerophorin present.

*Sphaerophorus globosus* is similar, but it is more heavily branched and the side branches have a distinctly smaller diameter than the main branches.

**Substrate and habitat.** On soil, bryophytes, and rocks.

***Sphaerophorus globosus* (Huds.) Vain.**
Coral lichen – sphérophore globuleux
Figure 88E

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Arviqtujuq Kangiqtua NW: site 18.3, *Gillespie et al. 12268* (CANL 10027135) • Atagulisaktalik: site 25.1, *Gillespie et al. 11559* (CANL 10027133) • Barnes Plateau S: site 31.4, *Gillespie et al. 11756* (CANL 10027132); site BI-1, *Hale 465* (CANL 1672, WIS-L-0097196) • Marble Lake: site 31.1, *Gillespie et al. 11737* (CANL 10027134) • Refuge Harbour: site 11.1, *Gillespie et al. 12081* (CANL 10027131) • Tingijattut: site TG-2, *Dare et al. 58* (CANL 10023806), *Dare et al. 66* (CANL 10023831).

**Identification.** Form – fruticose. Thallus grey-green in shade, becoming yellow-brown to brown and shiny when exposed. Main branches with a distinctly larger diameter than the side branches. With sphaerophorin and occasionally thamnolic acid or hypothamnolic acid.

*Sphaerophorus fragilis* is similar, but it is not as branched and its branches all are similar in diameter.

**Substrate and habitat.** On soil, bryophytes, and rocks.

**Stereocaulaceae**

***Stereocaulon alpinum* Laurer**
Alpine foam lichen – stéréocaule alpin
Figure 88F

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 25.1, *Gillespie et al. 11560* (CANL 10027040) • Refuge Harbour: site 11.1, *Gillespie et al. 12060* (CANL 10027039).

**Identification.** Form – fruticose. Primary thallus absent or disappearing. **S**econdary thallus stalked, stalks vertical and horizontal, branched, to 4(–5) cm tall, often with distinct upper and lower surfaces, with thin tomentum throughout that is pinkish on new growth to white-grey on older areas. Phyllocladia flat, overlapping, dense on upper surface, without digitate or coralloid growths. Apothecia rare, at tips of stalks.

*Stereocaulon alpinum* is similar to *Stereocaulon rivulorum,* but that species has convex and wart-like to coarsely granular phyllocladia that are not flat, shorter branches (to 3 cm high), and it does not have a distinct upper and lower surface.

**Substrate and habitat.** On sandy soil and gravel.

***Stereocaulon rivulorum* H.Magn.**
Shore foam lichen – stéréocaule des rivages

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, Hale *484* (CANL 75588, WIS-L-0073048).

**Identification.** Form – fruticose. Primary thallus absent or disappearing. **S**econdary thallus stalked, without main stem; stalks in low clumps, to 3 cm high, contorted, branched, tomentum thin. Phyllocladia convex and wart-like to coarsely granular, often with cylindrical lobes that are sometimes branched, never flat.

*Stereocaulon alpinum* is somewhat similar, but its phyllocladia are flat, the branches are covered in thick tomentum, and it has a distinct upper and lower surface.

**Substrate and habitat.** On soil in areas that are frequently wet.

**Teloschistaceae**

***Polycauliona candelaria* (L.) Frödén, Arup & Søchting**
Shrubby sunburst lichen – xanthorie chandelier
Figure 88G

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Marble Lake: site 31.1, *Gillespie et al. 11738* (CANL 10024540) • Refuge Harbour: site 11.1, *Gillespie et al. 12078* (CANL 10024539).

**Identification.** Form – foliose. Thallus bright orange, cushion-forming, usually forming large colonies, lobed, lobes to 0.5 mm wide. Soredia on lobe margins.

The only other common, bright orange, foliose lichen in the park, *Rusavskia elegans*, differs by being closely appressed, having larger lobes (up to 1.3 mm wide), and not having soredia, instead being smooth throughout. *Rusavskia sorediata*, an orange species that is also sorediate, is uncommon in the park and differs in being closely appressed.

**Substrate and habitat.** On exposed boulders.

**Notes.** Infrequent in the park.

***Rusavskia elegans* (Link) S.Y.Kondr. & Kärnefelt**
Elegant sunburst lichen – xanthorie élégante – Quajautik (Blondeau et al. 2011)

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Agguqti: site 8.4, *Gillespie et al. 12004* (CANL 10024602) • Kangiqtualuk Uqquqti: site 30.3, *Gillespie et al. 11717* (CANL 10024541) • Tingijattut: site TG-2, *Dare et al. 93* (CANL 10027065).

**Identification.** Form – foliose. Thallus bright orange, closely appressed, lobes to 1.3 mm wide. Soredia absent.

*Polycauliona candelaria* and *Rusavskia sorediata* have the same bright orange colour as *R. elegans*, but they both are sorediate.

**Substrate and habitat.** on exposed rock.

**Notes.** Common in the park.

***Rusavskia sorediata* (Vain.) S.Y.Kondr. & Kärnefelt**
Sugared sunburst lichen – xanthorie granuleuse
Figure 88H

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Kangiqtualuk Uqquqti: site 28.2, *Gillespie et al. 11682* (CANL 10024542).

**Identification.** Form – foliose. Thallus bright orange, closely appressed. Soredia present.

*Polycauliona candelaria* and *Rusavskia elegans* have the same bright orange colour, but *P. candelaria* has erect lobes that form cushions and *R. elgans* does not produce soredia.

**Substrate and habitat.** On exposed rocks.

**Notes.** Infrequent in the park.

**Trapeliaceae**

***Placopsis gelida* (L.) Lindsay**
Bull's-eye lichen

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 653* (CANL 10017793, O 254664, WIS-L-0072140).

**Identification.** Form – crustose, but its lobed margins make it appear somewhat foliose. Thallus pale pink-white, with discrete soralia. Cephalodia pink to yellow-brown, thick, hemispherical. Apothecia pink. With gyrophoric acid and no 5-0-methylhiascic acid.

The pale pink-white thallus with large pink to yellow-brown cephalodia make this species distinct in the park.

**Substrate and habitat.** On exposed non-calcareous rocks.

**Umbilicariaceae**

***Umbilicaria arctica* (Ach.) Nyl.**
Arctic rocktripe lichen – ombilicaire arctique

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Tingijattut: site TG-2, *Dare et al. 94a* (CANL 10023750).

**Identification.** Form – foliose. Thallus umbilicate. Upper surface brown with contorted rounded ridges that are blister-like and do not form a network. Lower surface black around umbilicus and grey near margins.

*Umbilicaria arctica* is similar to *U. hyperborea*, but that species has a uniformly brown to brown-black lower surface.

**Substrate and habitat.** On exposed non-calcareous boulders.

**Inuit Qaujimajatuqangit.** In Nunavik, *Umbilicaria* spp. are reported to be used in soup, as medicine, as kindling, and as an abrasive for softening sealskins (Blondeau et al. 2011) and as a medicinal tea (Clark 2012).

**Figure 89. A.** *Umbilicaria cylindrica*, habit. *Gillespie et al. 11778*. **B.** *Umbilicaria proboscidea*, habit. Atagulisaktalik, July 25, 2021. Photos by P.C. Sokoloff.

***Umbilicaria cylindrica* (L.) Delise ex Duby**
Fringed rocktripe lichen – ombilicaire cylindrique
Figure 89A

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 25.1, *Gillespie et al. 11568a* (CANL 10024611) • Barnes Plateau S: site BI-1, *Hale 206* (CANL 10662, MIN 664300, US 4570443, WIS-L-0052781), *Hale 315* (CANL 11179, WIS-L-0054222) • Kangiqtualuk Uqquqti: site 28.4, *Gillespie et al. 11665* (CANL 10027041); site 31.10, *Gillespie et al. 11778* (CANL 10024589) • Ravenscraig Harbour: site 18.7, *Gillespie et al. 12284a* (CANL 10024607) • Refuge Harbour: site 14.3, *Gillespie et al. 12093* (CANL 10024590), • Tingijattut: site TG-2, *Dare et al. 94b* (CANL 10023749); site 15.4, *Gillespie et al. 12161* (CANL 10024588).

**Identification.** Form – foliose. Thallus umbilicate. Upper surface grey-brown. Lobe margins densely ciliate. Lower surface smooth, pink-brown. Apothecia black, common on upper surface.

The umbilicus and dense marginal cilia are distinctive in the park.

**Substrate and habitat.** On exposed rock.

**Inuit Qaujimajatuqangit.** See *U. arctica* for uses of *Umbicularia* spp.

***Umbilicaria hyperborea* (Ach.) Hoffm.**
Blistered rocktripe lichen – ombilicaire hyperboréenne

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 25.1, *Gillespie et al. 11568b* (CANL 10024598) • Barnes Plateau S: site BI-1, *Hale 489* (CANL 10830, WIS-L-0053091).

**Identification.** Form – foliose. Thallus umbilicate. Upper surface brown with contorted rounded ridges that are blister-like and do not form a network. Lower surface uniformly brown to brown-black. Apothecia gyrose.

*Umbilicaria arctica* is similar, but its lower surface is black around the umbilicus and grey near the margins. *Umbilicaria proboscidea* is also somewhat similar, but it has a dark grey upper surface with a network of narrow ridges, and its lower surface is tan near the umbilicus and grey near the margins.

**Substrate and habitat.** On exposed non-calcareous rock.

**Inuit Qaujimajatuqangit.** See *U. arctica* for uses of *Umbicularia* spp.

***Umbilicaria proboscidea* (L.) Schrad.**
Greater salted rocktripe lichen – ombilicaire éléphant – Quajautik, Siarqijautik, Quajautik, Quasautik (Blondeau et al. 2011)
Figure 89B

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Atagulisaktalik: site 25.1, *Gillespie et al. 11567* (CANL 10024610), *Gillespie et al. 11568c* (CANL 10024600) • Barnes Plateau S: site BI-1, *Hale 469* (CANL 11036, DUKE 310091, WIS-L-0053676) • Ravenscraig Harbour: site 18.7, *Gillespie et al. 12284b* (CANL 10024609) • Refuge Harbour: site 11.1, *Gillespie et al. 12084* (CANL 10024591).

**Identification.** Form – foliose. Thallus umbilicate. Upper surface grey to brown-black with a network of narrow ridges and white pruina near centre of thallus. Lower surface tan near umbilicus, grey near margins.

*Umbilicaria arctica* and *U. hyperborea* are somewhat similar, but they have a brown upper surface with contorted rounded ridges that are blister-like and do not form a network.

**Substrate and habitat.** On exposed non-calcareous rock.

**Inuit Qaujimajatuqangit.** See *U. arctica* for uses of *Umbicularia* spp.

***Umbilicaria torrefacta* (Lightf.) Schrad.**
Punctured rocktripe lichen – ombilicaire perforée

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 470* (WIS-L-0054030).

**Identification.** Form – foliose. Thallus umbilicate. Upper surface brown to dark brown, with grooves near the margins that become perforated. Lower surface light to medium brown, with trabecula.

The umbilicus, perforated thallus, and trabeculae on the lower surface make *U. torrefacta* distinctive in the park.

**Substrate and habitat.** On exposed non-calcareous rock.

**Inuit Qaujimajatuqangit.** See *U. arctica* for uses of *Umbicularia* spp.

***Umbilicaria vellea* (L.) Hoffm.**
Fleecy rocktripe lichen – ombilicaire cotonneuse

**Material examined.** CANADA – Nunavut • Agguttinnii TP • Barnes Plateau S: site BI-1, *Hale 560* (WIS-L-0054104).

**Identification.** Form – foliose. Thallus umbilicate, 10(–18) cm in diameter. Upper surface grey, without ridges. Lower surface black, papillate, with longer pale to dark brown rhizines and shorter black rhizines.

The umbilicate thallus, grey upper surface without ridges, and two types of rhizines make this species easy to distinguish in the park.

**Substrate and habitat.** On exposed or shaded rocks and cliffs.

**Inuit Qaujimajatuqangit.** See *U. arctica* for uses of *Umbicularia* spp.

## DISCUSSION

Our study is the most comprehensive survey of the plants and lichens of Agguttinni TP, even though some areas were unreachable for logistical reasons, and provides the first detailed baseline botanical survey of the park, and indeed of any location in eastern central Baffin Island. Knowing which species are present, where they are distributed, and which ones are rare are essential requirements for conservation and developing management strategies. Baseline surveys are the foundation for monitoring species introductions and vegetation changes induced by climate change and other factors.

Prior to our 2021 fieldwork only 45 species of vascular plants had been collected from the area within the boundary of Agguttinni TP (Table 3), and even fewer, only those made during the 1950 Baffin Island Expedition (18 species as currently circumscribed), had been reported in the literature, as dots on distribution maps (Porsild 1957, 1964; Porsild and Cody 1980; Aiken et al. 2007). Our 2021 collections include 93 species (three with two subspecies each) not previously collected (Table 3), and the 2022 collections of Raynold and Bültmann include an additional three species. This represents an overall increase in the number of collections of over 200%, and a considerably greater increase in the species and collections recorded in the literature. Our 2021 collections included all but four species now known from the park (*Deschampsia sukatschewii*, *Draba subcapitata*, *Erigeron eriocephalus*, and *Epilobium arcticum*), all of which were collected from the Barnes Plateau where our survey effort was limited due to weather and time. *Erigeron eriocephalus* was also collected from Atagulisaktalik; although we made extensive collections at this locality, 2021 was a particularly cold summer and plants may not have been in flower in late July when we visited, and perhaps not at all that year.

All vascular plant species in the park are native; no introduced species were recorded. Across the circumarctic the number of non-native species is low compared with other ecozones (Daniëls et al. 2013; Wasowicz et al. 2019). Only 101 species or 5% of the total Arctic flora are considered to be stabilized introductions (Daniëls et al. 2013), and an additional 69 species (3%) are Arctic species that have spread and naturalized in the Arctic beyond their native range (Daniëls et al. 2013). Wasowicz et al. (2019) recorded a total of 341 non-native taxa (8.6%) in the Arctic that are either stabilized or casual introductions. Arctic Canada (as defined in Elvebakk 1999; CAVM Team 2003; Walker et al. 2005), in particular, has few non-native

species, with only five species known to be naturalized (excluding the small area of Arctic Yukon), and most from mainland areas (Wasowicz et al. 2019); the Arctic Archipelago part of Arctic Canada, including Baffin Island, has no known naturalized species and few casual introductions (Gillespie et al. 2015; Saarela et al. 2017, 2020a, 2020b, 2023).

No vascular plant species in the park are considered to be of conservation concern by the governments of Canada or Nunavut (Canadian Endangered Species Conservation Council 2022). Arctic Canada has few truly rare species, and most of these are not threatened; only one species, *Braya pilosa,* found in the western Arctic, has been listed as a species at risk in Canada (*Species at Risk Act*. Schedule 1: List of wildlife species at risk. https://laws.justice.gc.ca/eng/acts/s-15.3/FullText.html) and the Northwest Territories (Government of the Northwest Territories 2022).

Vascular plant species diversity of Agguttinni TP falls within the 75-150 species range expected in the Circumarctic Bioclimatic subzone C (CAVM Team 2003; Walker et al. 2005). The total species number of 141 is at the high end of the subzone C range, and also falls within the species range of subzone D (125-250 spp.), which we attribute to the higher diversity of the warmer sheltered valleys at the heads of the large fiords, specifically Kangiqtualuk Agguqti and Kangiqtualuk Uqquqti.

Four of the five most species diverse vascular plant families in the park, Poaceae, Cyperaceae, Caryophyllaceae, and Brassicaceae, are among the eight largest families in the Circumpolar Arctic (Daniëls et al. 2013), and among the five largest in the Canadian Arctic Archipelago (Aiken et al. 2007). Compared with other areas in the Canadian Arctic, Agguttinni TP had the same five largest families as on Dorset and Malliq islands (Saarela et al. 2020a), also in subzone C, but relatively more Saxifragaceae species (fifth largest family in the park) and fewer Asteraceae species than many areas comprehensively surveyed in zones D and E (Saarela et al. 2013, 2017, 2020b, 2023). *Carex* is the most species diverse genus in the park, as it is across the Arctic (e.g., Daniëls et al. 2013, Aiken et al. 2007, Saarela et al. 2017, 2020b, 2023). The majority of genera in the park (40 of 65) have only a single species, which is also typical of Arctic floras (Daniëls et al. 2013).

Vascular plant species diversity has been characterized in four other Nunavut Territorial Parks. A total of 102 taxa were recorded in Mallikjuak TP (40 km$^2$, subzone C) on Mallik Island, off the southwest coast of Baffin Island (Saarela et al. 2020a), 211 species in Katannilik TP (1,262 km$^2$, subzone D) on southeastern Baffin Island, 57 taxa in Ovayok TP (16 km$^2$, subzone D) near Cambridge Bay, Victoria Island (Saarela et al. 2020b), and 207 taxa in Kugluk TP (10.5 km$^2$, subzone E) in western mainland Nunavut (Saarela et al. 2017). Agguttinni TP has considerably higher species diversity than Mallikjuak TP in the same subzone, which can be attributed to its much greater size (16,465 km$^2$) and habitat diversity compared to the smaller coastal influenced Mallikjuak TP. As expected, species diversity is considerably less than in the parks surveyed in the more southerly subzones D and E, with the exception of Ovayok, which is much smaller, has much less habitat diversity (being centred on an esker), and has not been comprehensively surveyed despite numerous visits by botanists (Saarela et al. 2020b).

Many species of vascular plants are rare in the park, seen at only one or few sites, and were often restricted to a very specific habitat. Twenty-six species or subspecies are known in the park from only a single locality, 21 of these from a single collection site, and 21 are known from only two localities (for a total of 47 taxa, 33%) (Table 7). Species that are habitat specialists and found at a single collection site include *Arabidopsis arenicola*, restricted to windblown sand, *Cherleria biflora* to a coastal snowbed community, *Leymus mollis* to shifting sand at the head of a fiord, and *Poa hartzii* to a large stony-sand river delta. *Vaccinium vitis-idaea* was found only on a low bank on a moist south-facing slope along the mouth of a fiord. *Tripleurospermum maritimum* and *Carex marina* were restricted to the margins of a small pool along a rocky shoreline. The other species recorded at only one site are *Carex ursina, Draba fladnizensis, D. micropetala, Equisetum variegatum, Eriophorum brachyantherum, E. russeolum, Festuca baffinensis, Poa abbreviata, Potentilla nivea, P. pedersenii, P. pulchella, Puccinellia bruggemannii, Ranunculus arcticus,* and *Sagina caespitosa*.

Few vascular plant species are extremely common. Six taxa were recorded at 18 or more of the 23 localities surveyed by us in 2021: *Cassiope tetragona* (22 localities), *Poa arctica* subsp. *arctica* (21), *Luzula confusa* (20), *Salix arctica* (20), *Anthoxanthum monticola* (18), and *Salix herbacea* (18).

*Salix richardsonii* is, by far, the largest shrub species in Agguttinni TP, attaining a height of about 1.5 m in the valleys at the head of Kangiqtualuk Agguqti (Figure 13F) and in the Sam Ford River valley (Figure 12G), where it is locally common. This species was also seen in two other localities in the Fiord and Mountain zone and at two localities on the Barnes Plateau, where it was rare (Figure 15B).

Our 2021 vascular plant collections include numerous significant distribution records, including new records for Baffin Island, eastern Baffin Island, and northernmost records in Canada. Our single collection of *Puccinellia bruggemannii*, a primarily High Arctic and western Arctic species, represents the first record of the species on Baffin Island. That of *Poa hartzii* is the fourth record from Baffin Island. Our collections of *Diapensia lapponica* and *Pedicularis flammea* represent the northernmost records in Canada (see species checklist for additional information). Collections of several other species, including *Arabidopsis arenicola*, *Arenaria humifusa*, *Carex holostoma*, *Sabulina stricta*, and *Woodsia alpina*, are among the northernmost records in Canada, and those of *Tofieldia pusilla* and *Tripleurospermum maritinum*, the northernmost and

among the northernmost records, respectively, from eastern Canada. Most of these northernmost records are from the large valleys at the heads of Kangiqtualuk Agguqti and Kangiqtualuk Uqquqti.

The single collection of *Poa abbreviata* from the head of Kangiqtualuk Agguqti represents the easternmost record in Canada. Collections of *Draba micropetala* and *D. subcapitata* are the first records from eastern Baffin Island. We report new records for species rare on Baffin Island (known from 6 or fewer localities) for the following species: *Askellia pygmaea*, *Deschampsia cespitosa* subsp. *septentrionalis*, *Draba arctica*, *Eriophorum brachyantherum*, *Poa hartzii* subsp. *hartzii*, *Silene sorensenis*, and *Taraxacum holmenianum*.

Agguttinni TP encompasses a broad diversity of vegetation types and plant communities, reflective of its complex mountain topography and climate. The dominant vegetation type is *Cassiope*-lichen-moss tundra and its many variants, which predominates in the Coastal Lowlands and Fiord and Mountain zones; excellent examples are at Atagulisaktalik (Figure 4A, B) and the Remote Peninsula near Refuge Harbour (Figure 4E, F). Rocky barrens dominated by mosses and lichens, with few vascular plants, cover extensive areas on the Barnes Plateau (Figure 7E). Low-lying wet areas throughout the park are most frequently dominated by sedge, graminoid, or graminoid-willow meadows. Many specialized habitats and plant communities are present within each zone and in many localities, which contribute substantially to species diversity. Plant communities associated with specific restricted habitats include snowbed communities in sheltered areas at the base of slopes (Figures 2F, 3A) and saline-adapted communities on sand or cobble ocean beaches (Figure 2A, E). Other examples of these diverse habitats, each with a characteristic plant community, include river deltas (Figure 5D, E), river flats (Figure 5B, H), riverbanks, sand hills and slopes (Figures 3A, 6E, 7H), wet seeps (Figures 2C, 3B), talus, and nutrient-enriched animal denning areas (Figure 3B).

Among the three ecogeographic zones into which we divided the park, the Fiord and Mountain zone had the highest vascular plant species diversity, with 92% (132) of the species and subspecies known from the park found here, and 37% (49) of these restricted to this zone (Table 4). *Salix richardsonii,* the only large shrub found in the park, was mostly restricted to this zone except for two locations on the Barnes Plateau. Whereas much of the Fiord and Mountain consists of dry, high elevation ridges and slopes with very low vascular plant diversity, sheltered valleys have much higher diversity. In particular, the large valleys at the heads of two deep fiords (Kangiqtualuk Agguqti and Kangiqtualuk Uqquqti) show exceptionally high vascular plant diversity, with a combined total of 120 species, 83% of all species known in the park (see below for discussions of these areas).

The Coastal Lowlands zone had intermediate vascular plant species diversity, with just over half of the known species and subspecies in the park (78); eight species are restricted to this zone (Table 4). Although individual localities are not particularly species diverse, the zone includes numerous interesting coastal and river habitats, for example the mouth and banks of the river Kuugaaluk. The Kuugaaluk area had the highest vascular plant diversity in the zone (62 species and subspecies); three species were found in the park only here (*Puccinellia bruggemanni, Draba micropetala,* and *Cherleria biflora*). The other species restricted to this zone include *Deschampsia cespitosa*, *Vaccinium vitis-idaea*, and three species of seashore habitats (*Carex ursina*, *Mertensia maritima*, *Tripleurospermum maritimum*).

The Barnes Plateau had the lowest vascular plant diversity of the three zones, with 40% (58) of the species known from the park (Table 4). Only three species (*Deschampsia sukatschewii*, *Draba subcapitata*, *Epilobium arcticum*) were recorded only from this zone.

Localities surveyed in Agguttinni TP exhibit an enormous variation in vascular plant species diversity, ranging from species-poor (10 species) to species-rich (108 species and infraspecific taxa). Much of Agguttinni TP is covered in rocky barrens with very low plant diversity (fewer than 10 vascular plant species). This includes high-elevation areas in the mountains, vast areas on the Barnes Plateau (Figure 7E), and some inland areas of the coastal lowlands (Figure 3E). Lichens and mosses are common, and the most abundant vascular plant species include *Cassiope tetragona* and *Luzula confusa*, which sometimes are the only vascular plants present.

Other areas with very low vascular plant diversity are the recently deglaciated zones adjacent to the Barnes Ice Cap and mountain glaciers (Figure 7A, B). These areas are characterized by the absence of lichens and the recent colonization by few, very small vascular plants, such as *Phippsia algida* and *Saxifraga rivularis*. The complete absence of lichens in these deglaciated zones suggests rapid ice melt. Low mounds of old black moss were common in the recently deglaciated zone adjacent to the ice cap (Figure 7B), with some showing signs of new green growth (Figure 82A, B). These moss plants likely date prior to the Little Ice Age, and at least some probably survived burial by ice for over 400 years, as has been documented on Ellesmere Island (La Farge et al. 2013).

At the other extreme of plant diversity, two areas at the heads of deep fiords show exceptionally high diversity. Kangiqtualuk Agguqti [Walker Arm] fiord head and river valley is the most diverse area in the park, with 108 vascular plant species and subspecies (Figure 6A–D; Table 4). It is followed by the Sam Ford River valley at the head of Kangiqtualuk Uqquqti (Figure 5D–H), where 99 species and subspecies were documented (Table 4). Both areas are large river valleys with large deltas, extensive flat terraces of glacioalluvial deposits, and many diverse habitats. Their inland, low elevation location results in a warmer, sunnier microclimate compared to the surrounding higher elevation uplands and mountains, and to the coastal lowlands, which are frequently shrouded in fog. Twenty-seven species and subspecies (19% of the

taxa known from the park) were found only at these localities: ten of these only at the head of Kangiqtualuk Agguqti (*Calamagrostis purpurascens*, *Carex marina*, *Diapensia lapponica*, *Eriophorum brachyantherum*, *Leymus mollis*, *Poa abbreviata*, *Ranunculus arcticus*, *Potentilla pedersenii*, *P. pulchella*, and *P. subgorodkovii*), and three only at the head of Kangiqtualuk Uqquqti (*Equisetum variegatum*, *Festuca baffinensis*, *Poa hartzii*). Numerous Low Arctic species reach or are close to their northern distribution in Canada here, for example *Arenaria humifusa*, *Carex holostoma*, *Diapensia lapponica*, *Pedicularis flammea*, *Sabulina stricta*, *Tofieldia pusilla*, and *Woodsia alpina*. A disjunct population of the primarily western Arctic Island and High Arctic species *Poa hartzii* was found at the head of Kangiqtualuk Uqquqti (also known from a similar habitat at the head of Clyde Inlet).

Our knowledge of the bryophyte species diversity and distribution in Agguttinni TP remains incomplete and is insufficient for species diversity comparisons or for confident assessment of the relative or absolute rarity / commonness of individual taxa that have been reported here. Liverworts, in particular, remain poorly known, in large part because many of them are minute and easily overlooked, especially by non-specialists; in general collections, they often are found only as incidental collections with other species. Bryophyte diversity in the park (68 species recorded here) is almost certainly grossly under-represented by our work. For comparison, Miller and Ireland (1978) recorded 133 bryophyte species on Bathurst Island (16,042 km2; Arctic subzone B), which is roughly the same size as Agguttinni TP but in a colder subzone. Hedderson and Brassard (1986) recorded 152 species at Nachvak Fiord, Labrador (Arctic subzone E), in an area smaller than Agguttinni TP.

Most of the mosses known from the park are common, widespread Arctic species. Three species — *Aulacomnium turgidum, Polytrichum piliferum,* and *Racomitrium lanuginosum*—have been detected by multiple collection teams through time, in all three park zones. These mosses often cover large areas where they occur and are particularly distinctive and readily identified in the field. Five mosses (*Andreaea alpina, Andreaea blyttii, Oligotrichum falcatum*, *Niphotrichum panschii, Ptychostomum arcticum,*) and seven liverworts (*Anthelia juratzkana, Cephaloziella varians, Gymnocolea inflata*, *Gymnomitrion concinnatum, G. coralloides*, *Neothocaulis binsteadii, Orthocaulis cavifolius*) found in the park are of possible conservation concern (i.e., S-Ranks of S1 or S2 alone or in combination) in Nunavut (Canadian Endangered Species Conservation Council 2022). Four mosses (*Aongstroemia longipes, Dicranella subulata, Kiaeria starkei*, *Loeskypnum wickesiae*) and two liverworts (*Kurzia pauciflora, Scapania paludosa*) may be new records for Nunavut; they were not previously listed as occurring in Nunavut (Canadian Endangered Species Conservation Council 2022). However, the significance of these occurrences should be interpreted in the context of the relatively preliminary status of bryophyte specimen digitization, occurrence reporting, and conservation data gathering, particularly for Arctic regions, as compared with vascular plants.

Most of the lichens recorded from Agguttinni TP are common species widespread in the Arctic, Notable lichens species in the park include: *Pilophorus cereolus*, which is new to Nunavut and the Canadian Arctic; *Parmelia skultii*, the first record for Baffin Island; *Euopsis pulvinata* and *Lichenomphalia alpina*, each second records for Baffin Island; and *Rusavskia sorediata*, a first record for central Baffin Island.

Currently, none of the lichen species in Agguttinni TP are considered to be of conservation concern by the governments of Canada or Nunavut (Canadian Endangered Species Conservation Council 2022). However, several lichens that are rarely reported in the Canadian Arctic occur in the park: *Cladonia luteoalba, Euopsis pulvinata, Lecidea lactea, Lichenomphalia alpina, Parmelia skultii, Pannaria hookeri, Pilophorus cereolus*, and *Rhizocarpon expallescens*. The most remarkable species is *Pilophorus cereolus*, which was not previously known from the Canadian Arctic. However, there are collections from adjacent Disko Island in Greenland (Thomson 1984) and from Iceland *(Kristinsson 7261* DUKE) and Svalbard (*Tønsberg 31927* BG), so, its presence in another Arctic region is not surprising. This species warrants conservation attention as it is somewhat conspicuous and easily identified, so it is unlikely to have been overlooked in other areas. Of the other Agguttinni TP lichens that are rarely reported in the Canadian Arctic, most of them are inconspicuous or difficult to determine so they may often be overlooked or not identified (Thomson 1984, 1997), but *Pannaria hookeri* is an exception. It is a distinctive species, but there are only 15 known collections in the Canadian Arctic and most of them are on the eastern side of Baffin Island and neighbouring Devon Island (Consortium of Lichen Herbaria 2023; Thomson 1984). A conservation rank should also be considered for *Pannaria hookeri.*

Several areas of Agguttinni TP may now be considered to be well-documented, at least for vascular plants, including the two valleys at the head of Kangiqtualuk Agguqti, Sam Ford River valley at the head of Kangiqtualuk Uqquqti, and the lower part of Kuugaaluk, from its mouth to about 8 km inland. However, the park is immense (1646 $km^2$), and vast areas remain either completely unexplored botanically or inadequately documented. We were unable to survey several large areas due to weather conditions that limited helicopter time and/or the ability to fly at higher altitudes, including most of the northern two thirds of the Barnes Plateau. Also, due to the cold summer weather in 2021 that resulted in reduced flowering and fruit set, we may have missed some species that did not flower; for example, we did not recollect one species (*Erigeron eriocephalus*) that was collected during the 1950 expedition. Continued exploration will likely result in the discovery of additional vascular plant species not yet recorded in the park and new sites for species rare in the park. Future surveys should target the botanically unexplored and under-explored

areas. Furthermore, although our collections of bryophytes and lichens, combined with previous collections, provide a good overview of the most common bryophytes and macrolichens of Agguttinni TP, further work by lichen and bryophyte specialists is needed for a comprehensive survey of these groups.

## ACKNOWLEDGEMENTS

Our 2021 fieldwork and research were undertaken as a joint partnership between Nunavut Parks and Special Places and the Canadian Museum of Nature, and in collaboration with Polar Knowledge Canada. We would like to give special thanks to: the community of Kanngiqtugaapik for graciously hosting us and allowing us to carry out research on their land; Jaypiti Inutiq and Leeno Apak for keeping us safe in the field and for sharing their knowledge of the land; helicopter pilot Stéphane Caron and mechanic Louis André Grégoire for transporting us safely to our camps and field sites, for the spectacular views, and for arriving just in time as a polar bear approached; Patrick Graillon for his amazing coordination and support while in the field; and Linda Vaillancourt for facilitating our productive partnership. Research was conducted under Nunavut Department of Environment Wildlife Research Permit WL 2021-038. Permission to access Inuit Owned Land within the park boundary was granted by the Qikiqtani Inuit Association under Land Use Permit QL1-2105. We thank Martha Raynolds and Helga Bültmann for sharing their 2022 collections from Generator Lake and gifting these to the CMN; Yemisi Dare and Julian Starr for their recent collections made in the park; Amanda Savoie for identifications of algae; Martha Raynolds and Greg Rand for sharing their images and allowing us to use them; Lyndsey Sharp for assistance in processing collections at CAN; and Luc Brouillet for his helpful review. We thank herbarium curators and staff at DAO and MT for allowing us to visit and examine specimens; we gratefully appreciated the friendly assistance of Shannon Asencio and Kelsey Joustra (DAO), and Geoffrey Hall (MT). The Canadian Museum of Nature, Nunavut Parks and Special Places, and Polar Knowledge Canada are gratefully acknowledged for provided financial and/or logistical support.

## ADDITIONAL INFORMATION

### Conflict of interest

The authors declare that no competing interests exist.

### Ethical statement

No ethical statement is reported.

### Funding

This study was financially supported by the Canadian Museum of Nature, Nunavut Parks and Special Places, and Polar Knowledge Canada.

### Author contributions

Conceptualization: LJG. Data curation: PCS. Formal analysis: LJG, PCS, GAL. Funding acquisition: LJG. Investigation: LJG, PCS, GAL. Methodology: LJG, PCS, GAL. Resources: PCS. Supervision: LJG. Project administration: LJG. Validation (including specimen identification): LJG, PCS, GAL, RTM, JD. Visualization: PCS, GAL, LJG. Writing – original draft: LJG, PCS, RTM, JD, GAL. Writing – review and editing: GAL, LJG, RTM, PCS, JD.

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### Data availability

All data that support the findings of this study are available in the main text and in the supplemental data file.

**Supplemental data.** Searchable csv file of vascular plant, bryophyte, and lichen specimens from Agguttinni Territorial Park, Baffin Island, Nunavut, Canada examined for this floristic study. Column headings are standard Darwin core fields, except for the following. Confirmed by: confirmation of older identifications (also includes some new determinations when we were not able to annotate a specimen). **General collection location:** main localities referred to and explained in the paper (see Tables 1, 2); **Site number:** collection site numbers referred to and explained in the paper (see Tables 1, 2). **NBCC number:** National Biodiversity Cryobank of Canada number for silica gel dried leaf tissue sample stored in cryobank. **url:** url for online image of specimen.

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